

## **Historic, Archive Document**

Do not assume content reflects current scientific knowledge, policies, or practices.



aHS1491  
A11542



United States  
Department of  
Agriculture

Agricultural  
Cooperative  
Service

ACS Research  
Report  
Number 77

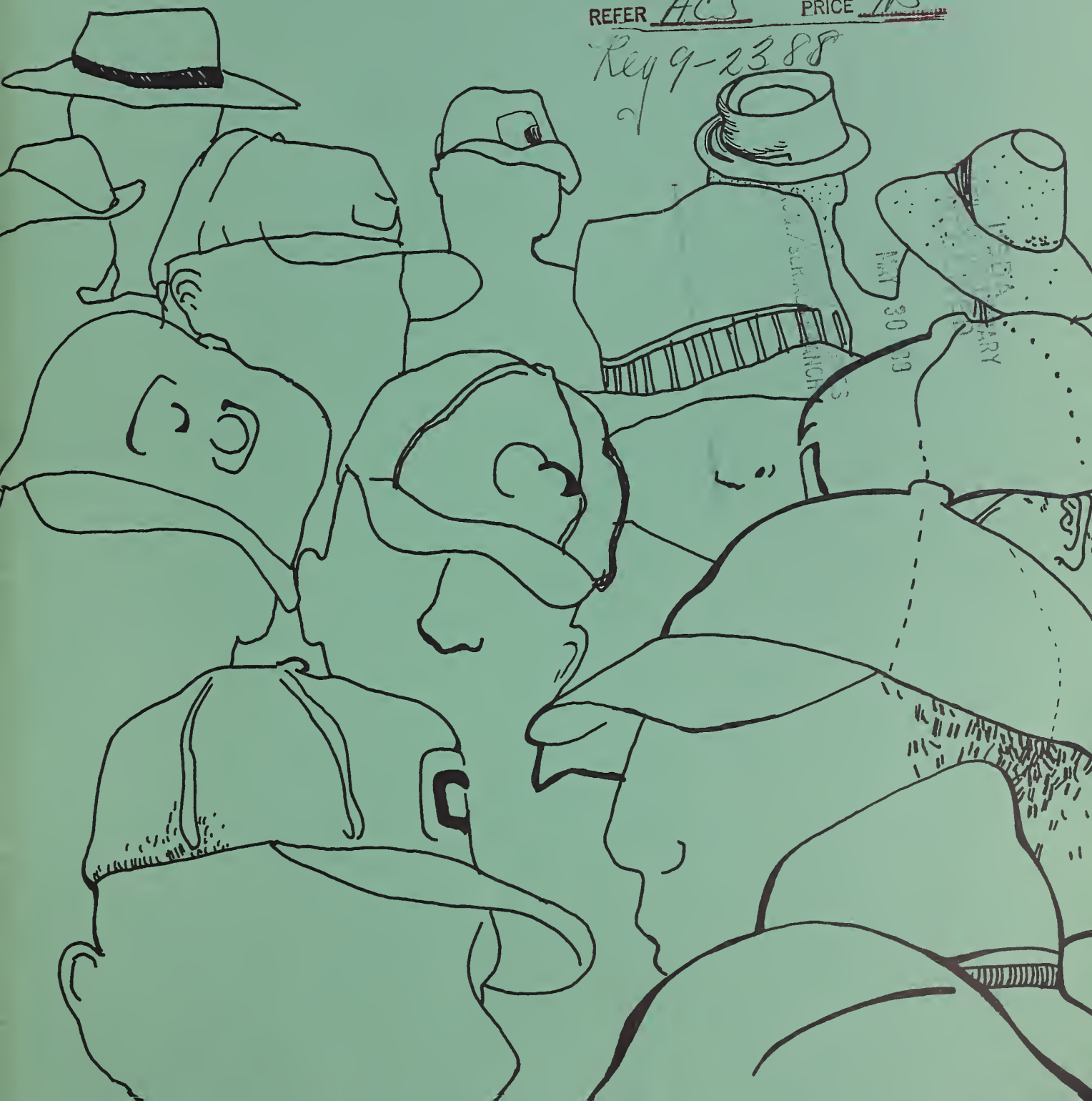
# Farmer Cooperatives: Members and Use

NO. PRINTED 1000 DATE 4/12/89

NEW ☒ RPT ☐ SL. REV. ☐ REV. ☐

REFER ACS PRICE MS

Key 9-2388



## Abstract

### **Farmer Cooperatives: Members and Use**

Charles A. Kraenzle

Roger A. Wissman

Thomas Gray

Beverly L. Rotan

Celestine C. Adams

Agricultural Cooperative Service

U.S. Department of Agriculture

Fifty-six percent of farmers were either members or nonmember patrons of marketing/farm supply cooperatives in both 1980 and 1986. However, the percent of farmers who held memberships dropped from 40 to 36 percent and nonmember patrons increased from 16 to 19 percent. The biggest change was an increase in percent of members among farmers with sales of \$500,000 or more from 56 percent in 1980 to 69 percent in 1986. The percent of farmers with multiple and inactive memberships dropped. The percent of farmers who used cooperatives for marketing declined but increased for those who used cooperatives for purchasing farm supplies. About 508,000 farmers used a cooperative for marketing and more than 1.1 million used a cooperative to purchase farm supplies in 1986. Data for the study were obtained from surveys by the National Agricultural Statistics Service (formerly Statistical Reporting Service), U.S. Department of Agriculture.

**Keywords:** Farmer cooperatives, marketing cooperatives, farm supply cooperatives, cooperative memberships.

## Preface

This study describes some major characteristics of farmer members of marketing and farm supply cooperatives in 1986 and changes since 1980. The study was conducted to determine changes in number of members and use of cooperatives since 1980 for research and educational purposes and for helping cooperative leaders and others in developing programs to better serve farmers. It provides information on number of members and nonmember patrons, and percent of farmers who were members and nonmember patrons and used cooperatives for marketing and purchasing activities. Multiple memberships, inactive members, nonmember nonpatrons, and percent of cooperative usage in marketing and purchasing major farm supplies also are presented. Information is presented by region, farm type, farm size, and operator's age.

The focus is on member and nonmember use of marketing/farm supply cooperatives of just the 2.4 million and 2.2 million farm operators in 1980 and 1986, respectively. It excludes all others engaged in farming and holding cooperative membership. Also excluded are those holding membership but were retired or not farming at the time of the surveys, and landlords who rented farmland on a share basis and held cooperative memberships because they marketed their share of farm production through or purchased their share of farm supplies from cooperatives (see definitions in appendix).

The authors wish to acknowledge the cooperation of the National Agricultural Statistics Service (NASS) who helped in collecting and assembling data for this study.

# Contents

Highlights.....	iii
Overview.....	1
Members and Nonmember Patrons .....	2
Multiple Memberships.....	9
Distribution of Members.....	12
Use of Marketing Cooperatives .....	13
Members.....	13
Farmers .....	14
Use of Farm Supply Cooperatives .....	17
Members.....	17
Farmers .....	18
Inactive Members .....	20
Nonmember Patrons .....	21
Held Membership in Another Cooperative .....	21
Held No Cooperative Membership .....	22
Nonmember Nonpatrons .....	25
Farmers' Use of Cooperatives for Products Marketed .....	26
Farmers' Use of Cooperatives for Farm Supplies Purchased .....	29
Feed.....	29
Fertilizer .....	29
Farm Chemicals.....	32
Seed .....	33
Petroleum .....	35
Conclusions and Implications .....	36
Appendix.....	37
Survey Description .....	37
Definitions .....	38
Other Publications .....	38
Appendix Tables .....	39



## Highlights

A majority (56 percent) of all farmers were involved with cooperatives either as members or nonmembers in both 1980 and 1986. However, the makeup of that involvement changed slightly—members dropped from 40 percent to 36 percent; nonmember patrons increased from 16 percent to 19 percent. The major change was an increase in percent of members among the largest farmers.

These major findings came from data collected through a national survey of farmers. Survey results provided some positive implications for cooperatives, but identified some areas needing increased attention.

Other major findings included:

- The percent of farmers who were members or nonmembers increased with farm size, rising from 41 to 79 percent. The major change occurred among the largest farmers (annual sales \$500,000 or more) where the proportion of members increased from 56 to 69 percent and nonmembers from 10 to 11 percent.
- Slightly fewer farmers held multiple memberships—14 percent of all farmers, compared with 16 percent in 1980.
- Four of eight regions accounted for 73 percent of members—Southeast, Lake States, Corn Belt, and Northern Plains.
- The percent of all farmers using cooperatives for marketing dropped slightly, from 25 to 23 percent. A major contributing factor was the decline in cash grain farmers.
- Nearly fifty percent of farmers who marketed through a cooperative marketed almost all their product. Seventy-five percent who used cooperatives marketed almost all their principal product through them.
- The percent of all farmers using cooperatives for purchasing farm production supplies rose from 48 percent in 1980 to 51 percent.
- A substantial drop in inactive members occurred, from 5 percent of all farmers in 1980 to 1.9 percent in 1986.
- Six percent of farmers held cooperative memberships and patronized one or more other cooperatives as nonmembers—down from 7 percent in 1980.
- Nineteen percent of all farmers held no membership in a cooperative and patronized at least one cooperative.
- More than 977,000 farmers (44 percent of the total) neither held membership in cooperatives nor traded with them. Seventy percent had annual gross farm sales of \$1,000 to \$9,999. Only 6 percent reported sales of \$100,000 or more.





# Farmer Cooperatives: Members and Use

Charles A. Kraenzle  
Roger A. Wissman  
Thomas Gray  
Beverly L. Rotan  
Celestine C. Adams<sup>1</sup>

## OVERVIEW

Cooperatives are generally organized to serve the needs of farmers who use them. Consequently, how cooperatives are structured and operated depends on cooperative leaders' understanding of farmers' needs and, of course, the commitment members make to the cooperative way of doing business.

If cooperatives are to be structured and operated to maximize the benefits provided to members, it is important that cooperative leaders know as much as they can about patrons, both members and nonmembers. For example, what changes have taken place in number and type of farms that affect use of cooperatives? Do farmers patronize cooperatives less as they get older? What characterizes those farmers who are nonmember nonpatrons of cooperatives? This study addresses these and other questions.

In June 1986, there were 2.2 million farms in the United States, down 9.1 percent or 221,000 from the 2.4 million farms in June 1980. From 1980 to 1986, number of cash grain, dairy, and livestock farms decreased while number of "other" farms increased.<sup>2</sup> The most significant change, however, was a decrease of 158,000, or 25 percent, in cash grain farms. Only those farms with annual sales of \$100,000 to \$249,999 and \$500,000 or more increased in number (table 1).

In 1986, nearly 46 percent of the farms were classified as livestock; 25 percent as "other"; 21 percent as cash

grain; and 8 percent as dairy. Classification was based upon the commodity accounting for the largest proportion of gross farm sales.

The implications are that along with the decreasing number of farms, more farmers are deriving their gross sales from "other" types of farm products besides grain, dairy, and livestock; farms are becoming larger; and a larger number of farms are moving into the \$100,000 to \$249,999 and \$500,000-plus sales categories.

Agriculture went through difficult economic times from 1980 to 1986. This is partly reflected by the decline in net cash flow from \$37.6 billion in 1980 to \$30.9 billion in 1986 and the decline in farm assets from \$1,102.3 billion in 1980 to \$789.4 billion in 1986.<sup>3</sup>

Decreased farm exports, low commodity prices, decreased land values, and other changes forced many farmers to leave the farm. Those who stayed had to change their method of operation in order to cut costs and improve farm income.

The number of farmer cooperatives as well as cooperative business volume also declined during this period:

Year	Cooperatives	Cooperative business volume		
		Marketing	Farm supply	Related services
	<i>Number</i>	----- <i>Billion dollars</i> -----		
1980	6,293	48.9	16.1	1.2
1986	5,369	41.5	15.1	1.8

<sup>1</sup>Charles A. Kraenzle, director, Statistics and Technical Services Staff (STSS); Roger A. Wissman, agricultural economist; Thomas Gray, rural sociologist; and Beverly L. Rotan, economist, Cooperative Services Division; and Celestine C. Adams, agricultural statistician, STSS.

<sup>2</sup>"Other" farms includes those producing tobacco; cotton; other field crops; vegetables; fruits and nuts; poultry; and miscellaneous products.

<sup>3</sup>USDA, *Economic Indicators of the Farm Sector: National Financial Summary, 1986*, Agriculture and Rural Economy Division, Economic Research Service, ECIFS 6-2, December 1987, p.8.

**Table 1—Number of farms, 1980 and 1986**

Category	Farms		Percent change <sup>1</sup>
	1980	1986	
<hr/>			
<i>-----Thousands-----</i>			
Region: <sup>2</sup>			
Northeast	162	144	-11.5
Southeast	590	528	-10.5
Lake States	284	234	-17.8
Corn Belt	528	469	-11.3
Northern Plains	204	195	-4.4
South Central	385	377	-1.9
Mountain	110	116	5.0
Pacific	169	150	-11.2
Farm type:			
Cash grain	631	473	-25.1
Dairy	214	181	-14.7
Livestock	1,084	1,012	-6.7
Other	504	546	8.2
Farm size: <sup>3</sup>			
\$ 1,000 - \$ 4,999	969	918	-5.3
\$ 5,000 - \$ 9,999	282	274	-2.7
\$ 10,000 - \$ 19,999	267	221	-17.3
\$ 20,000 - \$ 39,999	274	205	-25.2
\$ 40,000 - \$ 99,999	355	289	-18.8
\$100,000 - \$249,999	181	214	18.1
\$250,000 - \$499,999	80	58	-28.0
\$500,000 or more	24	33	39.7
All farms	2,433	2,212	-9.1

<sup>1</sup>Based on number of farms before rounding to thousands.

<sup>2</sup>See figure 1 for the States in each region and appendix table 1 for number of farms by region, type, and size.

<sup>3</sup>Annual gross farm sales.

The decrease in number of cooperatives was the result of cooperatives going out of business, mergers, and consolidations.

Cooperative business volume that excludes intercooperative business totaled \$66.2 billion in 1980 and \$58.4 billion in 1986.

Most farm products marketed by cooperatives in 1986 were milk, grain, soybeans, fruits and vegetables, and livestock. These accounted for 83 percent of the total net cooperative marketing volume. Major farm supplies sold were petroleum products, fertilizer, and feed, accounting

for nearly 72 percent of net cooperative farm supply sales.<sup>4</sup>

From 1980 to 1986, cooperative marketing volume dropped 14.5 percent, farm supply sales declined 6.4 percent, and income from related services increased 45.6 percent. Overall, cooperative net business volume decreased 11.5 percent. Seventy-one to seventy-four percent of total business volume handled by cooperatives came from marketing farm products.

## MEMBERS AND NONMEMBER PATRONS

More than 807,000, or more than 36 percent, of the 2.2 million active farm operators<sup>5</sup> reported they held membership in one or more marketing and/or farm supply cooperatives in 1986—a decline of about 160,000 members from 1980. Collectively, these farmers held 1.3 million memberships for an average of 1.6 memberships each. Another 427,000, or more than 19 percent, used these cooperatives as nonmember patrons—an increase of 32,000 since 1980. Consequently, 1.2 million, or nearly 56 percent, were either members or nonmember patrons of at least one marketing or farm supply cooperative in 1986—a net decline of 9 percent or 122,000 members and nonmember patrons since 1980. However, the overall percentage of farmers—either members or nonmember patrons—remained about the same.

The decrease in cooperative members was partially related to the drop in number of farms. Number of members decreased even more than the decline in number of farmers in the Corn Belt, Northern Plains, and South Central regions. This decrease occurred among livestock producers and those farmers with sales of \$5,000 to \$9,999.

Members increased in the Mountain region and among farmers with annual sales of \$100,000 to \$249,999 and \$500,000 or more. The increase in members in these two size groupings was related to the increase in farmers (table 2). Members among “other” farmers changed very little because the number of “other” farmers increased during this time period.

<sup>4</sup>Ralph Richardson and others, *Farmer Cooperative Statistics, 1986*. ACS Service Report No. 19, Agricultural Cooperative Service, U.S. Department of Agriculture, Washington, D.C., December 1987.

<sup>5</sup>A farm operator is the principal member of a farming enterprise. In a partnership, the farm operator is the person making day-to-day decisions or the oldest partner if decisionmaking is shared equally. Generally, throughout this report, farm operators are called farmers.

Nonmember patrons increased even though number of farms declined. Most of the net increase in nonmember patrons appeared to be the result of livestock producers on small farms (\$1,000 to \$9,999 in annual sales) using cooperatives to purchase farm supplies and "other" farmers using cooperatives to market their farm products.

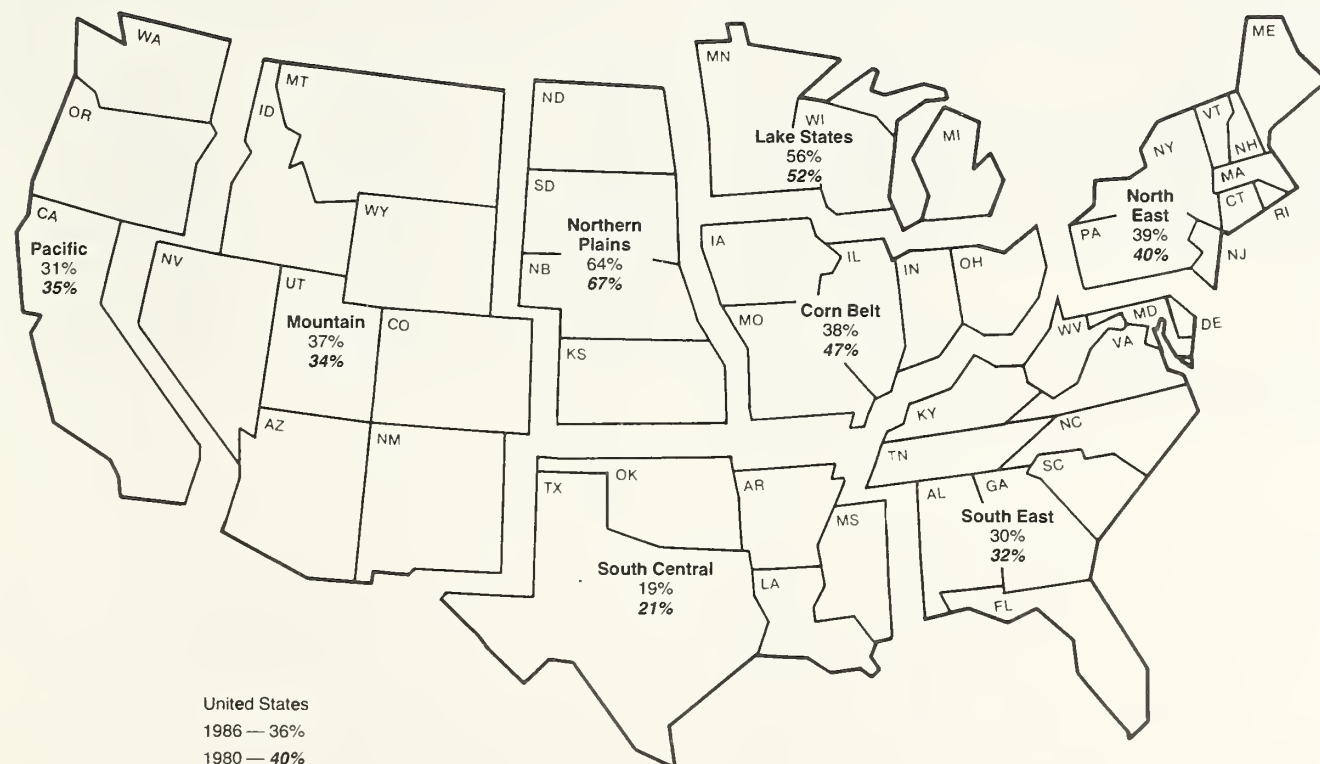
The overall change in cooperative involvement is shown by the net increase or net decrease of total members and nonmember patrons (table 2). The greatest decrease in number of members and nonmember patrons was in the Corn Belt and among cash grain farmers. The largest increase in number of farmers involved with cooperatives was among those with \$100,000 to \$249,999 in sales, primarily due to an increase in number of farmers in this grouping.

The largest concentration of cooperative members was in the Northern Plains; among dairy farmers; among farmers with annual sales of \$250,000 to \$499,999; and among farmers less than 36 years of age. From 1980 to 1986, the percent of farmers with cooperative memberships increased only in the Lake States and Mountain regions (fig. 1); among dairy and cash grain farmers; and among farmers with annual sales of \$40,000 to \$99,999 and \$500,000 or more. In fact, the percent of farmers holding membership with \$500,000 in sales or more increased from 56 percent in 1980 to 69 percent in 1986 (table 3).

Lowest percent of farmers holding membership was among farmers in the South Central region; livestock and "other" farmers; those with annual sales less than \$5,000; and those 55 years old or more. Although there

Figure 1

#### Farm Operators Reporting Membership in Cooperatives



**Table 2—Change in number of farmers, members, and nonmember patrons from 1980 to 1986<sup>1</sup>**

Category	Farmers	Members	Nonmember patrons	Members and nonmember patrons
<i>Number<sup>1</sup></i>				
Region:				
Northeast	(18,607)	(8,087)	(5,082)	(13,169)
Southeast	(62,089)	(33,887)	10,300	(23,587)
Lake States	(50,515)	(17,430)	(5,940)	(23,370)
Corn Belt	(59,663)	(71,281)	10,099	(61,182)
Northern Plains	(8,983)	(11,470)	8,517	(2,953)
South Central	(7,258)	(10,615)	15,646	5,031
Mountain	5,455	5,451	(642)	4,809
Pacific	(18,930)	(12,324)	(413)	(12,737)
Farm type:				
Cash grain	(158,288)	(72,280)	(15,294)	(87,574)
Dairy	(31,361)	(13,413)	(7,153)	(20,566)
Livestock	(72,266)	(73,808)	29,470	(44,338)
Other	41,325	(142)	25,462	25,320
Farm size:				
\$ 1,000 - \$ 4,999	(50,986)	(38,508)	27,707	(10,801)
\$ 5,000 - \$ 9,999	(7,531)	(26,192)	16,629	(9,563)
\$ 10,000 - \$ 19,999	(46,043)	(32,811)	222	(32,589)
\$ 20,000 - \$ 39,999	(69,092)	(39,316)	(7,898)	(47,214)
\$ 40,000 - \$ 99,999	(66,635)	(37,417)	(8,513)	(45,930)
\$100,000 - \$249,999	32,780	21,627	4,141	25,768
\$250,000 - \$499,999	(22,472)	(16,497)	(1,090)	(17,587)
\$500,000 or more	9,389	9,471	1,287	10,758
All farms	(220,590)	(159,643)	32,485	(127,158)

<sup>1</sup>Parentheses indicate decrease.



**Table 3—Members and nonmember patrons, 1980 and 1986**

Category	Members		Nonmember patrons		Total <sup>1</sup>	
	1980	1986	1980	1986	1980	1986
<i>Percent of farmers in each category</i>						
Region:						
Northeast	40	39	26	25	66	64
Southeast	32	30	20	24	52	54
Lake States	52	56	14	14	66	70
Corn Belt	47	38	16	21	63	59
Northern Plains	67	64	10	15	77	79
South Central	21	19	13	17	34	36
Mountain	34	37	20	18	54	55
Pacific	35	31	11	13	46	44
Farm type:						
Cash grain	50	52	16	17	66	69
Dairy	71	76	12	11	83	87
Livestock	31	26	18	22	49	48
Other	32	28	15	18	47	46
Farm size:						
\$ 1,000 - \$ 4,999	21	18	18	23	39	41
\$ 5,000 - \$ 9,999	34	25	18	25	52	50
\$ 10,000 - \$ 19,999	44	38	17	21	61	59
\$ 20,000 - \$ 39,999	51	50	15	16	66	66
\$ 40,000 - \$ 99,999	62	63	13	13	75	76
\$100,000 - \$249,999	69	69	11	11	80	80
\$250,000 - \$499,999	71	70	9	10	79	80
\$500,000 or more	56	69	10	11	65	79
Operator's age:						
Less than 36	—	40	—	20	—	60
36 to 54	—	36	—	19	—	55
55 or more	—	35	—	20	—	55
All farms	40	36	16	19	56	56

<sup>1</sup>Totals may not add due to rounding.  
 — = Data were not collected for 1980.

were some changes, overall, these membership patterns were similar to those in 1980.

In 1986, concentration of nonmember patrons was greatest in the Northeast and Southeast regions; among livestock producers; and those with annual sales of \$5,000 to \$9,999. Part of the reason for the high percent of nonmember patrons in the Northeast and Southeast regions is that the regions accounted for 51 percent of the livestock farms and 42 percent of farms with annual sales less than \$10,000. It appears many livestock producers on small farms purchased farm supplies from a cooperative on a nonmember patron basis.

Again, the overall involvement with cooperatives is shown by the percent of total members and nonmember patrons in each region, farm type, farm size, and age category. In 1986, the highest percent of farmers involved with cooperatives was in the Northern Plains; among dairy farmers; among farmers with annual sales of \$100,000 or more; and among farmers less than 36 years of age. The lowest percent was among farmers in the South Central and among those with annual sales of \$1,000 to \$4,999 (table 3).

The drop in the percentage of farmers who held cooperative membership and the increase in percent of farmers who patronized cooperatives as nonmembers may have been the result of depressed agricultural economic conditions, cooperatives' membership policies, and/or a change in tax status.

From 1980 to 1986, many cooperatives did not earn enough to pay patronage refunds. This prevented them from obtaining new members where their membership policy was based on deducting the membership fee from any refunds earned by new patrons.

From the tax standpoint, many cooperatives continued to give up their "Section 521" tax status. Section 521 gives certain tax benefits to cooperatives, but a cooperative with Section 521 status must meet rigid requirements. One such requirement is that members and nonmembers be treated exactly alike. As a practice, all patrons are encouraged to become members to facilitate this requirement. A cooperative without Section 521 status does not have to treat nonmembers as it does members, and may not pursue membership as aggressively.

**Table 4—Percentage of farmers who held cooperative memberships, 1986**

Category	Region								United States
	North-east	South-east	Lake States	Corn Belt	Northern Plains	South Central	Mountain	Pacific	
Percent of farmers in each category									
Farm type:									
Cash grain	31	30	54	46	72	45	66	61	52
Dairy	74	71	85	61	82	79	65	79	76
Livestock	23	23	48	33	56	12	30	15	26
Other	11	35	29	12	47	21	24	34	28
Farm size:									
(000)									
\$ 1 - \$ .4.9	18	22	26	16	31	8	17	17	18
\$ 5 - \$ 9.9	21	28	30	25	45	13	27	23	25
\$ 10 - \$ 19.9	35	39	48	36	59	26	28	32	38
\$ 20 - \$ 39.9	52	46	66	48	66	32	48	34	50
\$ 40 - \$ 99.9	66	51	81	56	76	47	58	48	63
\$100 - \$249.9	80	61	85	61	79	54	61	56	69
\$250 - \$499.9	75	56	88	70	79	52	70	61	70
\$500 or more	78	47	72	70	83	69	44	73	69
Operator's age:									
Less than 36	45	30	61	39	59	20	35	31	40
36 to 54	36	30	57	40	64	19	34	28	36
55 or more	40	29	52	36	67	18	41	33	35
All farms	39	30	56	38	64	19	37	31	36

**Table 5—Number of members, 1980 and 1986**

Category	Members <sup>1</sup>		Percent change <sup>2</sup>
	1980	1986	
-----Thousands-----			
Region:			
Northeast	64	56	-12.5
Southeast	190	157	-17.8
Lake States	148	131	-11.8
Corn Belt	250	179	-28.5
Northern Plains	137	125	-8.4
South Central	81	71	-13.1
Mountain	37	43	14.6
Pacific	59	46	-21.0
Farm type:			
Cash grain	316	244	-22.9
Dairy	151	138	-8.9
Livestock	340	266	-21.7
Other	159	159	-0.1
Farm size:			
\$ 1,000 - \$ 4,999	200	161	-19.3
\$ 5,000 - \$ 9,999	96	70	-27.3
\$ 10,000 - \$ 19,999	117	84	-28.1
\$ 20,000 - \$ 39,999	141	102	-27.9
\$ 40,000 - \$ 99,999	218	181	-17.2
\$100,000 - \$249,999	125	147	17.3
\$250,000 - \$499,999	57	40	-29.0
\$500,000 or more	13	23	71.8
All farms	967	807	-16.5

<sup>1</sup>Totals may not add due to rounding.<sup>2</sup>Percent based on number of members before rounding to thousands.

Regionally, the percent of farmers who held cooperative memberships in 1986 was greatest among dairy farmers in the Lake States and Northern Plains. At the other extreme, the percent of farmers with memberships was lowest among "other" farmers in the Northeast and Corn Belt regions and among livestock producers in the South Central region (table 4).

Membership was low among farmers with annual sales of less than \$5,000 but the percentage varied widely among regions. In almost all regions, the percentage of farmers holding membership increased with farm size. In only two regions, Mountain and Southeast, cooperative members fell below 69 percent for farmers with sales of at least \$500,000.

In most regions, membership was higher among younger farmers than among those 55 years old or more. Exceptions were the Northern Plains, Mountain, and Pacific regions, where farmers 55 years old or more had a higher percent of members than those less than 36 years.

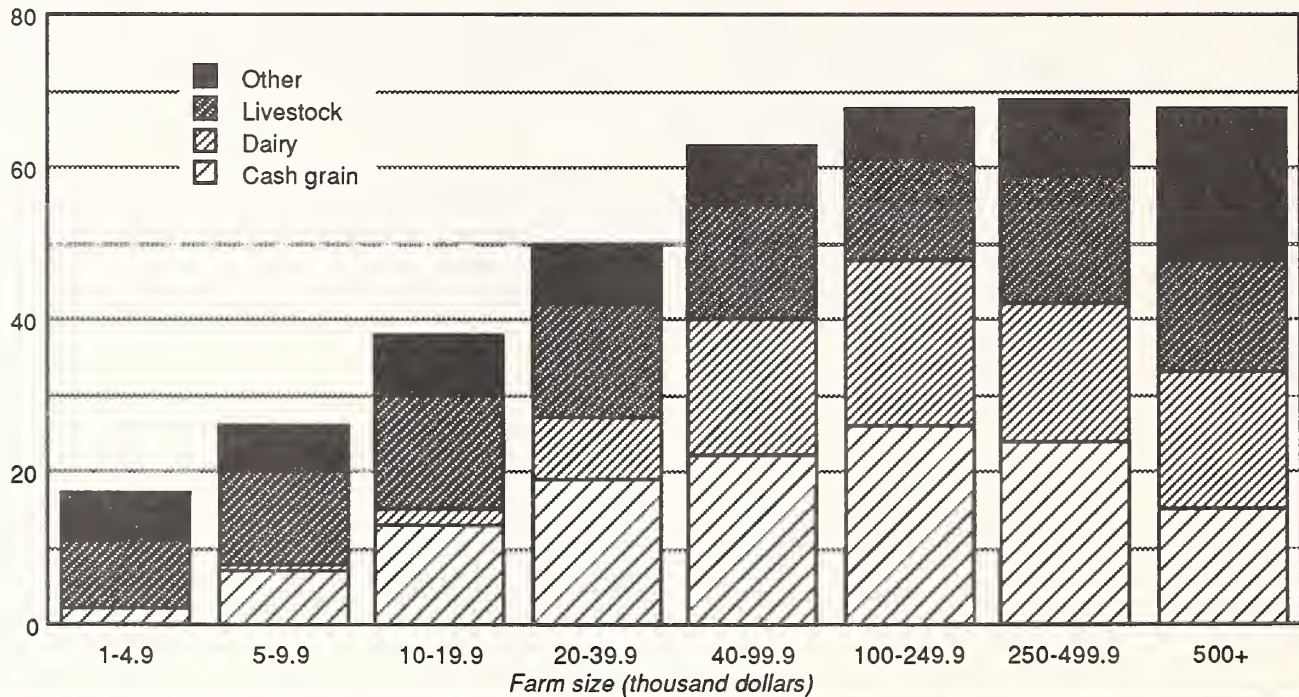
Farmers who held cooperative memberships dropped 16.5 percent from 1980 to 1986, compared with the 9.1 percent decrease in number of farms as mentioned earlier. Number of members increased in only one region and within two size groupings. The most important change was the increase in members with sales of \$500,000 or more (table 5).

In 1986, the percentage of cash grain farmers with memberships increased as farm size increased—from 23 to 74 percent (table 6). For dairy and livestock, the percent who held memberships dropped for the larger size farms. Overall, the percent of farmers who held memberships increased as farm size increased until farms reached \$500,000 or more. Here, the percentage was down slightly (fig. 2). This could indicate farmers on the largest farms did not need cooperatives as much as operators of smaller farms needed them. Farmers on the largest farms could be marketing directly to noncooperative processors or purchasing supplies directly from noncooperative manufacturers.



**Figure 2--Percent of Farmers Who Held Cooperative Memberships, by Farm Size and Type, 1986**

*Percent of farmers in each category*



**Table 6—Percentage of farmers who held cooperative memberships, by farm type and size, 1980 and 1986**

Farm size	Farm type								All farmers	
	Cash grain		Dairy		Livestock		Other			
	1980	1986	1980	1986	1980	1986	1980	1986	1980	1986
Percent of farmers in each category										
\$ 1,000 - \$ 4,999	22	23	26	25	21	15	18	21	21	18
\$ 5,000 - \$ 9,999	42	36	37	37	30	22	34	24	34	25
\$ 10,000 - \$ 19,999	47	45	60	61	38	34	45	34	44	38
\$ 20,000 - \$ 39,999	56	59	63	61	46	45	41	36	51	50
\$ 40,000 - \$ 99,999	62	65	76	82	54	55	49	45	61	63
\$100,000 - \$249,999	69	69	86	84	69	61	47	52	69	69
\$250,000 - \$499,999	74	71	88	87	77	68	43	51	71	70
\$500,000 or more	64	74	68	77	59	60	39	65	56	69
All farms	50	52	71	76	31	26	32	28	40	36

## MULTIPLE MEMBERSHIPS

Farmers may hold memberships in more than one cooperative for a number of reasons. These include (1) the need to market through one cooperative and purchase farm supplies through another, (2) the marketing of different products through specialized cooperatives or through specially equipped cooperatives, (3) the desire to take advantage of price both in marketing and purchasing, and (4) the desire to deal with certain people or take advantage of specific services.

Whatever reason farmers hold multiple memberships in cooperatives begs the question of why cooperatives can't work together so farmers can obtain needed services through membership in one organization at least for marketing or purchasing activities. This is especially true for those areas where a large number of cooperatives exist.

In 1986, 39 percent of members or over 14 percent of farmers held multiple memberships compared with 16 percent in 1980—a decline of 60,000 farmers with multiple memberships. Farmers with memberships in two and three cooperatives dropped but increased in four or more. The latter increase was the result of increased multiple memberships by those farm operators with annual sales of \$100,000 to \$249,999 and \$500,000 or more.

The largest number of multiple memberships was held by farmers in the Lake States, Northern Plains, and Corn Belt regions; by cash grain farmers; and by farmers with annual sales of \$40,000 to \$249,999 (table 7). By age, farmers in the 36-to-54 year-old category held the largest number of multiple memberships.

**Table 7—Farmers with one or multiple memberships, 1986**

Category	Memberships	
	One	Two or more
<i>Number</i>		
Region:		
Northeast	34,474	21,921
Southeast	119,866	36,668
Lake States	44,247	86,694
Corn Belt	119,042	59,563
Northern Plains	52,579	72,649
South Central	46,304	24,329
Mountain	29,564	13,125
Pacific	33,800	12,478
Farm type:		
Cash grain	136,078	108,032
Dairy	50,121	87,737
Livestock	178,736	87,721
Other	114,941	43,937
Farm size:		
\$ 1,000 - \$ 4,999	133,832	27,443
\$ 5,000 - \$ 9,999	54,344	15,502
\$ 10,000 - \$ 19,999	57,508	26,528
\$ 20,000 - \$ 39,999	61,970	39,691
\$ 40,000 - \$ 99,999	85,401	95,259
\$100,000 - \$249,999	58,402	88,458
\$250,000 - \$499,999	16,248	24,054
\$500,000 or more	12,171	10,492
Operator's age:		
Less than 36	69,853	58,927
36 to 54	196,686	146,872
55 or more	213,337	121,628
All farms	479,876	327,427

**Table 8—Percentage of farmers who held one or multiple memberships, 1986**

Category	Memberships				
	One	Two	Three	Four or more	Two or more
<i>Percent of farmers in each category</i>					
Region:					
Northeast	24	11	3	1	15
Southeast	23	6	1	( <sup>1</sup> )	7
Lake States	19	17	11	9	37
Corn Belt	25	9	3	1	13
Northern Plains	27	22	8	7	37
South Central	12	4	1	1	6
Mountain	26	7	3	2	12
Pacific	22	6	1	1	8
Farm type:					
Cash grain	29	14	6	3	23
Dairy	28	23	16	9	48
Livestock	18	6	1	1	8
Other	21	6	1	1	8
Farm size:					
\$ 1,000 - \$ 4,999	15	3	( <sup>1</sup> )	( <sup>1</sup> )	3
\$ 5,000 - \$ 9,999	20	4	1	1	6
\$ 10,000 - \$ 19,999	26	9	2	( <sup>1</sup> )	11
\$ 20,000 - \$ 39,999	30	14	4	2	20
\$ 40,000 - \$ 99,999	30	19	9	5	33
\$100,000 - \$249,999	27	22	11	9	42
\$250,000 - \$499,999	28	19	12	11	42
\$500,000 or more	37	14	11	7	32
Operator's age:					
Less than 36	22	10	6	3	19
36 to 54	21	10	4	2	16
55 or more	23	9	3	2	14
All farms	22	9	3	2	14

<sup>1</sup>Less than 0.5 percent.

The percent of farmers with multiple memberships ranged from a low of 6 percent in the South Central region to a high of 37 percent in both the Northern Plains and Lake States (table 8).

Forty-eight percent of the dairy farmers held multiple memberships, compared with 44 percent in 1980. Twenty-three percent of the cash grain farmers held multiple memberships, compared with 8 percent for both livestock and "other" farmers.

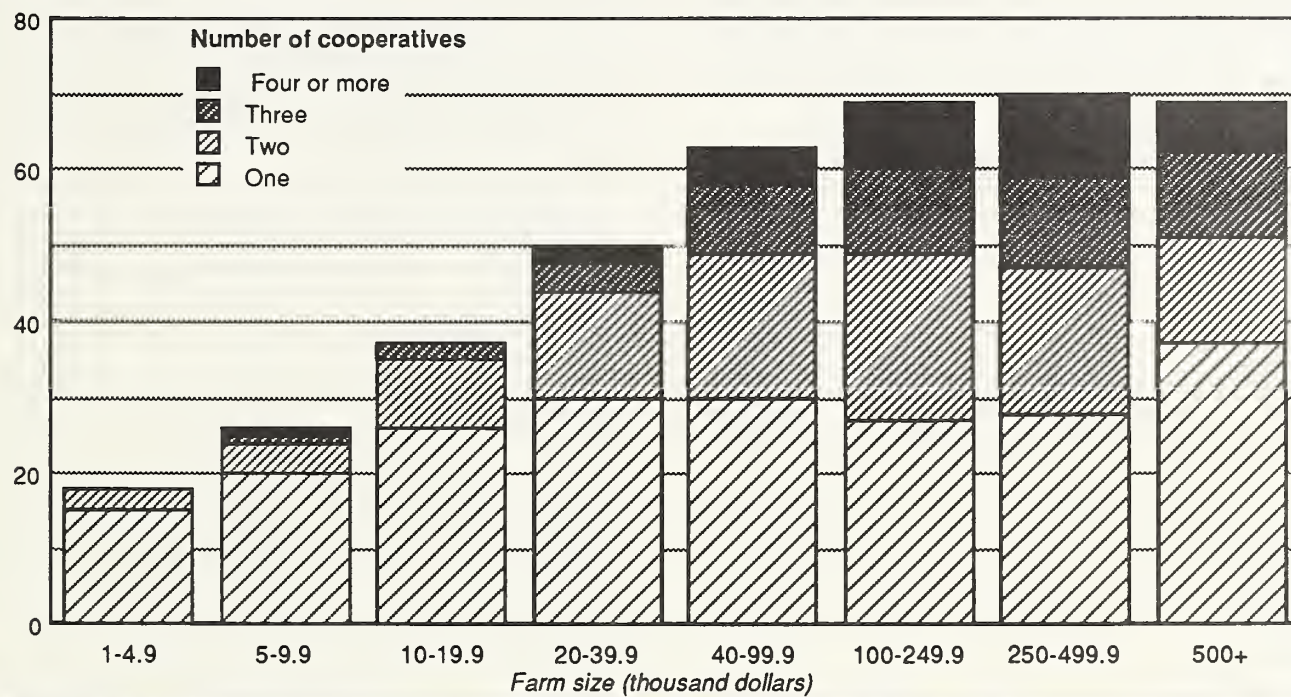
Incidence of multiple memberships increased as farm size increased for operations with annual sales of less than \$250,000. Among farmers with annual sales of \$1,000 to \$4,999, only 3 percent held multiple memberships. The highest percent of multiple memberships was among farmers with annual sales of \$100,000 to \$499,999 (fig. 3).

From 1980 to 1986, the percent of multiple memberships among farmers on smaller farms declined while the percent among the larger farm operators remained the same or increased. By operator's age, younger farmers had a higher percent of multiple memberships than older farmers.



**Figure 3--Percentage of Farmers Who Held Memberships in One and Multiple Co-ops, by Farm Size, 1986**

*Percent of farmers in each category*



## DISTRIBUTION OF MEMBERS

More than 20 percent of cooperative members were in the Corn Belt (table 9). This was down from 1980 because of the large decline in cash grain farmers who had held memberships. Four of the eight regions accounted for 73 percent of the cooperative members. In 1985 (the latest year State data were available), these same regions accounted for 66 percent of the total number of cooperatives and 65 percent of the total business volume handled by cooperatives. For comparison purposes, farms, members, cooperatives, and business volume handled by cooperatives were distributed as follows:

Region	Farms <sup>1</sup>	Cooperatives <sup>2</sup>	Business	Members <sup>1</sup>
			volume <sup>2</sup>	
<i>Percent</i>				
Northeast	6	6	9	7
Southeast	24	11	11	19
Lake States	11	18	18	16
Corn Belt	21	18	25	22
Northern Plains	9	19	11	16
South Central	17	15	9	9
Mountain	5	6	4	5
Pacific	7	7	13	6
Total	100	100	100	100

<sup>1</sup> 1986

<sup>2</sup> 1985

The Southeast had the largest percent of farms. The Corn Belt also had a large percent of farms and accounted for the largest percent of members and cooperative business volume. However, the Northern Plains had the largest percent of cooperatives. The Pacific region, which includes California, reflected a large volume of business done by fewer cooperatives and fewer members in comparison with other regions.

By farm type, livestock and cash grain farmers accounted for a total of 63 percent of members. Since 1980, the percentage of members increased for dairy and "other" farmers and decreased for cash grain and livestock producers.

By farm size, 52 percent of the members had annual sales of less than \$40,000. Forty percent had sales between

**Table 9—Distribution of cooperative members, 1980 and 1986**

Category	Members	
	1980	1986
<i>Percent</i>		
Region:		
Northeast	7	7
Southeast	20	19
Lake States	15	16
Corn Belt	26	22
Northern Plains	14	16
South Central	8	9
Mountain	4	5
Pacific	6	6
Farm type:		
Cash grain	33	30
Dairy	16	17
Livestock	35	33
Other	16	20
Farm size:		
\$ 1,000 - \$ 4,999	21	20
\$ 5,000 - \$ 9,999	10	9
\$ 10,000 - \$ 19,999	12	10
\$ 20,000 - \$ 39,999	15	13
\$ 40,000 - \$ 99,999	22	22
\$100,000 - \$249,999	13	18
\$250,000 - \$499,999	6	5
\$500,000 or more	1	3
Operator's age:		
Less than 36	—	16
36 to 54	—	43
55 or more	—	41
All farms	100	100

— = Data were not collected for 1980.

\$40,000 and \$249,999. Only 8 percent of the members had annual sales of \$250,000 or more. Since 1980, the distribution of members has shifted more toward those farmers with annual sales of \$100,000 to \$249,999 and \$500,000 or more. This shift relates to the change in the number of farms during the period.

## USE OF MARKETING COOPERATIVES

### Members

Nearly 20 percent, or 440,000 farmers, held one or more memberships in a marketing and/or farm supply cooperative and used a marketing cooperative—down from more than 498,000 in 1980. Of the 440,000 members using marketing cooperatives, nearly 36 percent were cash grain, 25 percent dairy, 21 percent livestock, and 18 percent “other.” More than 61 percent of the members were in the Corn Belt, Lake States, and Northern Plains. Nearly 52 percent of the members had annual sales of \$40,000 to \$249,999.

The decrease in the number of farmers who used marketing cooperatives was partly related to the drop in cash grain and livestock producers. The net decline in cash grain and livestock farmer members who used marketing cooperatives was 24 and 25 percent, respectively. The largest decreases were among farmers in the Corn Belt and those with annual sales of \$10,000 to \$99,999. The number of “other” and dairy farmer members who used marketing cooperatives increased. A significant change was the 77-percent increase in members with \$500,000 or more in sales (table 10).

Among “other” farmer members, the biggest increase in number who used marketing cooperatives was in the Southeast region and among farmers in the \$1,000 to \$4,999 grouping. Most of the increase in number of dairy farmers who used marketing cooperatives was in the Lake States, Pacific, and Corn Belt regions and among those with annual sales of \$100,000 to \$249,999 and \$500,000 or more.

Members who used cooperatives for marketing ranged from 9 percent of livestock producers to 62 percent of dairy farmers (table 11). The highest percent was found among dairy farmers in the Lake States and among those with annual sales of \$100,000 to \$249,999. The lowest percentages were among livestock producers in the Southeast, South Central, and Pacific regions and among those farmers on the smallest farms. Overall, the percentage of farmers who held one or more cooperative memberships and used a cooperative for marketing increased in most cases as size of farm increased. Farmers on very large operations were the exception.

In general, the percent of farmers who were members and used a cooperative for marketing declined as age of

**Table 10—Members who used cooperatives for marketing, 1980 and 1986**

Category	Members		Percent change <sup>1</sup>
	1980	1986	
-----Thousands-----			
Region:			
Northeast	35	31	-10.2
Southeast	57	55	-2.4
Lake States	91	89	-1.7
Corn Belt	133	95	-28.6
Northern Plains	97	86	-11.5
South Central	37	36	-1.8
Mountain	16	15	-6.7
Pacific	33	32	-3.9
Farm type:			
Cash grain	206	157	-23.8
Dairy	106	112	5.3
Livestock	122	92	-24.7
Other	64	79	23.1
Farm size:			
\$ 1,000 - \$ 4,999	52	40	-23.0
\$ 5,000 - \$ 9,999	36	26	-28.0
\$ 10,000 - \$ 19,999	59	42	-29.6
\$ 20,000 - \$ 39,999	82	61	-26.1
\$ 40,000 - \$ 99,999	137	120	-12.3
\$100,000 - \$249,999	87	106	23.0
\$250,000 - \$499,999	36	29	-20.6
\$500,000 or more	9	15	77.0
All farms	498	440	-11.8

<sup>1</sup>Changed based on number of members before rounding to thousands.

**Table 11—Percentage of farmers who were members and used cooperatives for marketing, 1986<sup>1</sup>**

Category	Farm type				All farmers
	Cash grain	Dairy	Livestock	Other	
Percent of farmers in each category					
Region:					
Northeast	12	58	13	7	22
Southeast	8	42	4	18	11
Lake States	37	72	25	10	38
Corn Belt	27	52	12	3	20
Northern Plains	55	67	32	25	44
South Central	34	65	4	12	10
Mountain	36	38	6	5	13
Pacific	46	70	4	26	21
Farm Size:					
\$ 1,000 - \$ 4,999	10	10	2	7	4
\$ 5,000 - \$ 9,999	15	22	7	10	9
\$ 10,000 - \$ 19,999	26	45	13	18	19
\$ 20,000 - \$ 39,999	44	41	17	21	30
\$ 40,000 - \$ 99,999	43	67	28	29	42
\$100,000 - \$249,999	49	72	35	35	50
\$250,000 - \$499,999	51	71	46	30	50
\$500,000 or more	46	69	32	42	47
Operator's age:					
Less than 36	35	61	12	13	26
36 to 54	34	62	9	15	20
55 or more	31	62	8	15	17
All farms	33	62	9	15	20

<sup>1</sup>This included farmers who held membership in a marketing or farm supply cooperative.

operator increased. The percent increased slightly for dairy and "other" farmers as age increased.

The percent of farmers (with membership) who used cooperatives for marketing varied widely among regions. It ranged from 3 to 26 percent for "other" type farmers, 4 to 32 percent for livestock producers, 8 to 55 percent for cash grain farmers, and 38 to 72 percent for dairy farmers.

### Farmers

From 1980 to 1986, the number of farmers (members and nonmembers) who used marketing cooperatives dropped more than 107,000. Most were cash grain and livestock

producers and nearly 54,000 of the reduction was in the Corn Belt. The decline in number of farmers who used marketing cooperatives was partially offset by an increase in number of "other" and dairy farmers, especially those with annual sales of \$100,000 to \$249,999 and \$500,000 or more (table 12).

The highest percent of farmers who used one or more cooperatives for marketing was among dairy farmers; farmers in the Northern Plains and Lake States; those with annual sales of \$100,000 to \$499,999; and farmers in the youngest age group. In fact, use of cooperatives for marketing appeared to decrease as operator's age increased (table 13). This decrease was also true for farmers who held memberships and used cooperatives for



**Table 12—Farmers who used cooperatives for marketing, 1980 and 1986**

Category	Farmers		Percent change <sup>1</sup>
	1980	1986	
<hr/>			
<i>-----Thousands-----</i>			
Region:			
Northeast	41	34	-17.8
Southeast	76	63	-17.0
Lake States	107	99	-7.6
Corn Belt	178	124	-30.3
Northern Plains	107	96	-9.9
South Central	48	42	-12.2
Mountain	22	17	-22.3
Pacific	38	34	-10.9
Farm type:			
Cash grain	260	187	-28.1
Dairy	114	118	3.4
Livestock	161	115	-28.6
Other	80	88	9.5
Farm size:			
\$ 1,000 - \$ 4,999	83	57	-31.3
\$ 5,000 - \$ 9,999	49	36	-27.0
\$ 10,000 - \$ 19,999	77	52	-32.2
\$ 20,000 - \$ 39,999	101	70	-31.1
\$ 40,000 - \$ 99,999	159	131	-17.7
\$100,000 - \$249,999	97	116	19.4
\$250,000 - \$499,999	39	30	-22.8
\$500,000 or more	10	16	63.2
All farms	615	508	-17.8

<sup>1</sup> Based on numbers before rounding to thousands.

marketing since nonmember patrons were a small percent of each category.

Seventy-four percent of farmers who used a cooperative for marketing in 1986 used only one. This, however, varied somewhat by region, farm type, farm size, and operator's age.

The percent of farmers who used cooperatives for marketing as nonmembers is the difference between farmers and members who used cooperatives for marketing (tables 11 and 13). Accordingly, the number of nonmembers who used cooperatives for marketing was

**Table 13—Percent of farmers who used cooperatives for marketing, 1986**

Category	Cooperatives used			
	One	Two	Three or more	All farmers <sup>1</sup>
Percent of farmers in each category				
Region:				
Northeast	20	3	( <sup>2</sup> )	23
Southeast	10	2	( <sup>2</sup> )	12
Lake States	29	10	3	42
Corn Belt	21	4	2	26
Northern Plains	33	11	5	49
South Central	8	2	1	11
Mountain	11	2	1	15
Pacific	19	2	1	22
Farm type:				
Cash grain	29	8	3	40
Dairy	48	13	4	65
Livestock	9	2	1	11
Other	13	3	1	16
Farm size:				
\$ 1,000 - \$ 4,999	5	1	( <sup>2</sup> )	6
\$ 5,000 - \$ 9,999	11	1	( <sup>2</sup> )	13
\$ 10,000 - \$ 19,999	20	3	( <sup>2</sup> )	24
\$ 20,000 - \$ 39,999	26	6	2	34
\$ 40,000 - \$ 99,999	32	10	3	45
\$100,000 - \$249,999	36	12	6	54
\$250,000 - \$499,999	35	11	7	53
\$500,000 or more	31	9	7	48
Operator's age:				
Less than 36	22	7	2	31
36 to 54	17	4	2	23
55 or more	16	3	1	20
All farms	17	4	2	23

<sup>1</sup>Totals may not add due to rounding.

<sup>2</sup>Less than 0.5 percent.

highest among farmers in the Corn Belt, those with sales of \$10,000 to \$19,999, and less than 36 years old.

Twenty-six percent of the farmers who used a cooperative for marketing used two or more. Sixteen percent of the farmers in the Northern Plains and 13 percent in the Lake

States used two or more marketing cooperatives. Seventeen and eleven percent of the dairy and cash grain farmers, respectively, used two or more marketing cooperatives.

Farmers with annual sales of \$100,000 to \$499,999 were more likely to use two or more marketing cooperatives than farmers on smaller farms. Only 1 percent of farmers with sales of \$1,000 to \$4,999 used two or more cooperatives, compared with 18 percent of the farmers with annual sales of \$100,000 to \$499,999 (fig. 4). Possible reasons were that the larger farm operators were better equipped to produce larger quantities of different products, shop around for the best price, and transport products longer distances than smaller farm operators.

The lowest percent of farmers who used cooperatives for marketing was in the South Central, Southeast, and Mountain regions; among livestock and "other" farmers; and among those farmers with annual sales of less than \$5,000. The major reason for the low volume in these

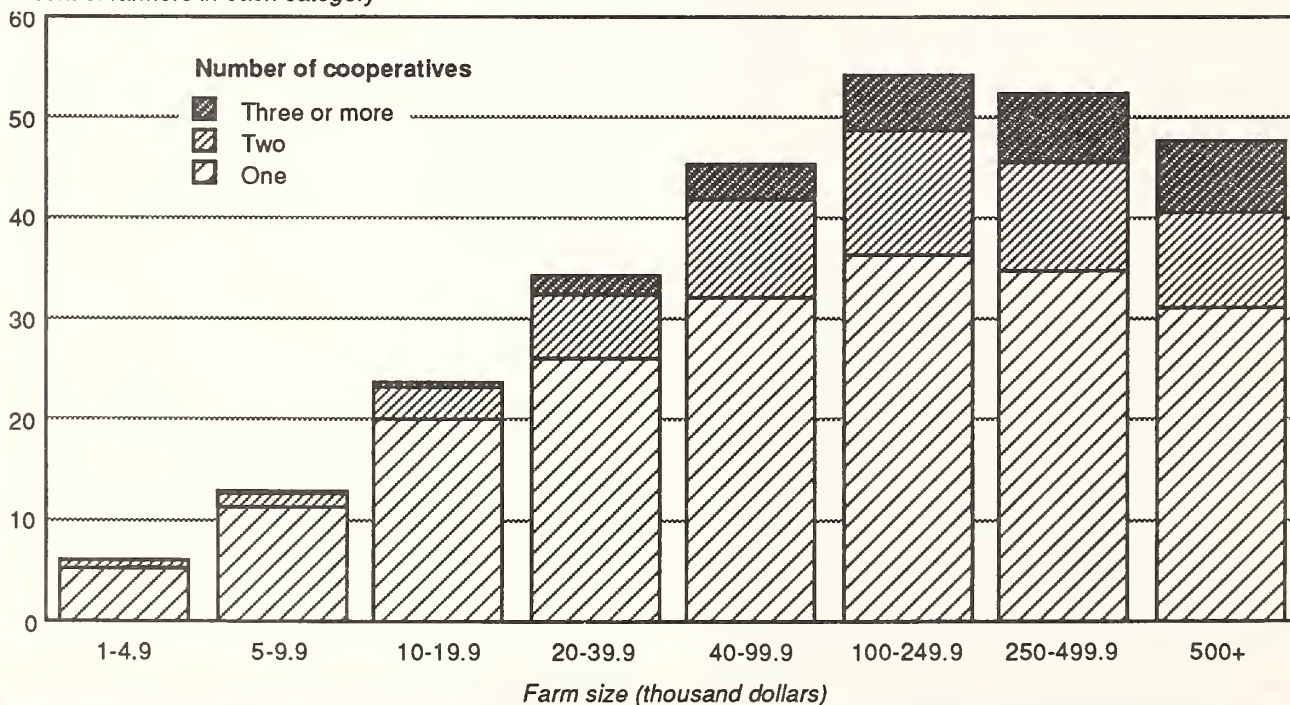
regions is the dominance of small livestock and "other" farms. The three regions accounted for 58 and 55 percent of the livestock and "other" farms, respectively, and nearly 61 percent of all farms with sales of less than \$5,000.

The comparatively lower use of marketing cooperatives in the Southeast, South Central, and Mountain regions may also be explained by other reasons. One is the probability of greater diversity in both type and class of livestock and other products produced in the regions, as well as attendant problems of having a marketing cooperative available to handle a particular type or class of livestock or product. Another is the greater probability that larger livestock producers in the Northern Plains would be more likely to produce and market cooperatively other farm commodities such as grain, thus reporting more marketing activity.<sup>6</sup>

<sup>6</sup>Paul C. Wilkins, *Marketing and Farm Supply Cooperatives: Membership and Use, 1980*, ACS Research Report No. 28, ACS, USDA, Washington, D.C., May 1983, p. 11.

**Figure 4--Percentage of Farmers Who Used One or More Cooperatives for Marketing, by Farm Size, 1986**

Percent of farmers in each category



## USE OF FARM SUPPLY COOPERATIVES

### Members

More members used cooperatives to purchase farm supplies than to market farm products. With a few exceptions, this difference occurred among all farm types, regions, farm sizes, and ages of farm operator.

Thirty-two percent, or nearly 714,000 farmers (789,000 in 1980), held membership in one or more cooperatives and used cooperatives to purchase farm supplies, compared with only 20 percent or 440,000 who held membership and used cooperatives for marketing. Of the 714,000 members, 35 percent were livestock producers, 31 percent cash grain farmers, 17 percent dairy, and 17 percent "other." Nearly 75 percent of the member-users were located in the Corn Belt, Southeast, Lake States, and Northern Plains. Nineteen percent of the members had sales of less than \$5,000 and nearly 42 percent sales of \$40,000 to \$249,999.

The net decline in number of members who used cooperatives to purchase farm supplies was again partly related to the decline in cash grain and livestock farmers. Compared with 1980, nearly 15 and 12 percent fewer cash grain and livestock producers, respectively, used cooperatives to purchase farm supplies. Most of the decrease in number of members who patronized cooperatives for farm supplies occurred among farmers in the Corn Belt and Southeast (table 14).

The biggest net increase in farmer-members (32,000) who used cooperatives to purchase farm supplies was among those with annual sales of \$100,000 to \$249,999. However, the largest percentage increase was among farmers with at least \$500,000 in sales. Here members increased nearly 83 percent.

The percent of farmers who were members and used cooperatives to purchase farm supplies was lowest for "other" and livestock producers and this varied greatly by region and farm size (table 15). The highest percent of farmers who held membership and used farm supply cooperatives was in the Northern Plains; among dairy farmers; and among those with sales of \$250,000 to \$499,999.

The percent of farmers who were members and used cooperatives for farm supplies increased as size of farm increased except for farmers on the largest farms. Overall, a higher percent of younger farmers were

**Table 14—Members who used cooperatives to purchase farm supplies, 1980 and 1986**

Category	Members		Percent change <sup>1</sup>
	1980	1986	
-----Thousands-----			
Region:			
Northeast	53	48	-9.6
Southeast	162	128	-21.1
Lake States	120	123	2.3
Corn Belt	206	162	-21.4
Northern Plains	114	121	6.8
South Central	66	63	-4.1
Mountain	32	39	24.2
Pacific	36	29	-19.9
Farm type:			
Cash grain	261	223	-14.6
Dairy	128	122	-5.1
Livestock	283	250	-11.5
Other	117	119	1.8
Farm size:			
\$ 1,000 - \$ 4,999	162	136	-16.5
\$ 5,000 - \$ 9,999	81	60	-25.7
\$ 10,000 - \$ 19,999	92	74	-20.2
\$ 20,000 - \$ 39,999	114	91	-20.6
\$ 40,000 - \$ 99,999	181	164	-9.6
\$100,000 - \$249,999	102	134	30.7
\$250,000 - \$499,999	45	37	-18.1
\$500,000 or more	10	19	82.7
All farms	789	714	-9.5

<sup>1</sup>Change based on number of members before rounding to thousands.

cooperative members and purchased supplies from a cooperative. This varied by farm type, especially among "other" farmers where the percent of farmers who were members and used cooperatives increased as age of the operator increased.

Regional differences in use of cooperatives to purchase farm supplies followed essentially the same pattern as was found among users of cooperatives for marketing but the percentages were greater. While use of cooperative marketing services ranged regionally from 7 to 52 percent among cash grain farmers and from 4 to 31 percent among livestock producers, comparable ranges for use of cooperative farm supply services were 24 to 68 percent



**Table 15—Percentage of farmers who were members and used a cooperative to purchase farm supplies, 1986<sup>1</sup>**

Category	Farm type				All farmers
	Cash grain	Dairy	Livestock	Other	
Percent of farmers in each category					
Region:					
Northeast	28	61	28	20	33
Southeast	25	65	21	25	24
Lake States	52	79	45	27	53
Corn Belt	40	54	31	10	35
Northern Plains	69	80	55	45	62
South Central	39	72	11	18	17
Mountain	61	58	28	22	34
Pacific	57	40	14	17	19
Farm Size:					
\$ 1,000 - \$ 4,999	19	24	14	15	15
\$ 5,000 - \$ 9,999	32	32	20	18	22
\$ 10,000 - \$ 19,999	41	45	32	25	33
\$ 20,000 - \$ 39,999	54	52	42	27	44
\$ 40,000 - \$ 99,999	60	73	54	34	57
\$100,000 - \$249,999	64	77	58	38	63
\$250,000 - \$499,999	65	79	66	43	64
\$500,000 or more	71	45	59	55	57
Operator's age:					
Less than 36	48	68	27	19	37
36 to 54	47	67	24	22	32
55 or more	47	66	25	23	31
All farms	47	67	25	22	32

<sup>1</sup>Included farmers who held membership in any marketing/farm supply cooperative.

among cash grain farmers and 11 to 55 percent among livestock producers.

## Farmers

If nonmember patrons are included with members, more than 1.1 million, or 51 percent, of all farmers used a cooperative to purchase farm production supplies in 1986 compared with 48 percent in 1980. Nineteen percent of farmers used cooperatives to purchase farm supplies as nonmember patrons. Thirty-eight percent of all farmers used one cooperative, and 13 percent used two or more to purchase farm supplies.

The number of farmers who used cooperatives to

purchase farm supplies was more than twice the number of farmers (508,000) who used cooperatives to market their farm products. Yet, 71 to 74 percent of cooperative business volume came from marketing farm products.

The net decline in number of farmers who used farm supply cooperatives from 1980 to 1986 was small compared with the net decline in number of farmers who used marketing cooperatives. Even with the drop in cash grain and dairy farmers who used cooperatives to purchase farm supplies, more "other" and livestock producers used farm supply cooperatives (table 16).

The small decrease in number of farmers who used cooperatives to purchase supplies was due to an increased

**Table 16—Farmers who used cooperatives to purchase farm supplies, 1980 and 1986**

Category	Farmers		Percent change <sup>1</sup>
	1980	1986	
<hr/>			
<i>-----Thousands-----</i>			
Region:			
Northeast	93	84	-9.9
Southeast	274	252	-8.1
Lake States	155	155	-.4
Corn Belt	287	254	-11.4
Northern Plains	133	149	12.2
South Central	113	128	13.0
Mountain	53	60	13.8
Pacific	54	48	-11.9
Farm type:			
Cash grain	351	302	-13.9
Dairy	153	139	-9.5
Livestock	470	473	.6
Other	189	217	14.7
Farm size:			
\$ 1,000 - \$ 4,999	335	341	1.6
\$ 5,000 - \$ 9,999	130	127	-2.2
\$ 10,000 - \$ 19,999	136	117	-13.9
\$ 20,000 - \$ 39,999	152	122	-19.5
\$ 40,000 - \$ 99,999	225	201	-10.8
\$100,000 - \$249,999	121	157	30.2
\$250,000 - \$499,999	51	43	-16.9
\$500,000 or more	12	22	79.7
All farms	1,162	1,130	-2.8

<sup>1</sup>Change based on number of farmers before rounding to thousands.

number of nonmembers who used cooperatives to purchase farm supplies in the Northern Plains, South Central, and Mountain regions. The number of members who used farm supply cooperatives dropped 9.5 percent. When nonmember patrons were included, the number dropped less than 3 percent.

The percent of farmers who used cooperatives to purchase farm supplies was highest among farmers in the Northern Plains; dairy farmers; farmers with annual sales above \$40,000; and farmers less than 36 years old. A large percent of these farmers also purchased farm supplies from two or more cooperatives (table 17).

**Table 17—Percentage of farmers who used cooperatives to purchase farm supplies, 1986**

Category	Cooperatives used			
	One	Two	Three or more	All farmers <sup>1</sup>
<i>Percent of farmers in each category</i>				
<b>Region:</b>				
Northeast	46	10	3	59
Southeast	41	6	1	48
Lake States	37	17	12	66
Corn Belt	43	9	3	54
Northern Plains	43	22	11	76
South Central	27	4	2	34
Mountain	41	8	4	52
Pacific	27	3	1	32
<b>Farm type:</b>				
Cash grain	44	14	6	64
Dairy	42	20	14	76
Livestock	37	7	2	47
Other	33	5	2	40
<b>Farm size:</b>				
\$ 1,000 - \$ 4,999	33	4	1	37
\$ 5,000 - \$ 9,999	39	6	1	46
\$ 10,000 - \$ 19,999	42	9	2	53
\$ 20,000 - \$ 39,999	42	13	4	60
\$ 40,000 - \$ 99,999	43	16	10	70
\$100,000 - \$249,999	44	18	12	73
\$250,000 - \$499,999	41	17	15	74
\$500,000 or more	46	13	8	68
<b>Operator's age:</b>				
Less than 36	39	11	6	56
36 to 54	37	9	4	50
55 or more	39	8	3	50
<b>All farms</b>	<b>38</b>	<b>9</b>	<b>4</b>	<b>51</b>

<sup>1</sup>Totals may not add due to rounding.

Of those farmers who used one or more cooperatives to purchase farm supplies, 75 percent used only one. This varied, however, from 56 percent of the farmers in the Lake States to 85 percent of the farmers in the Southeast.

By farm type, 55 percent of the dairy and 83 percent of the "other" type farmers used only one cooperative to

purchase farm supplies. Among the small or part-time farm operators (\$1,000 to \$4,999 in sales), 89 percent used only one. The percent of farmers who used two or more cooperatives, however, increased as size of farm increased. Among those farmers with annual sales of \$250,000 to \$499,999, 44 percent used two or more (fig. 5).

Percent of nonmember patrons who used cooperatives to purchase farm supplies was highest among farmers in the Northeast (26 percent) and Southeast regions (24 percent); livestock producers (22 percent); and those with sales of \$5,000 to \$9,999 (24 percent). In general, the percent of farmers who were nonmembers and purchased farm supplies from a cooperative decreased as size of farm increased. No relationship appeared to exist between the percent of nonmembers who purchased supplies from cooperatives and age of operator.

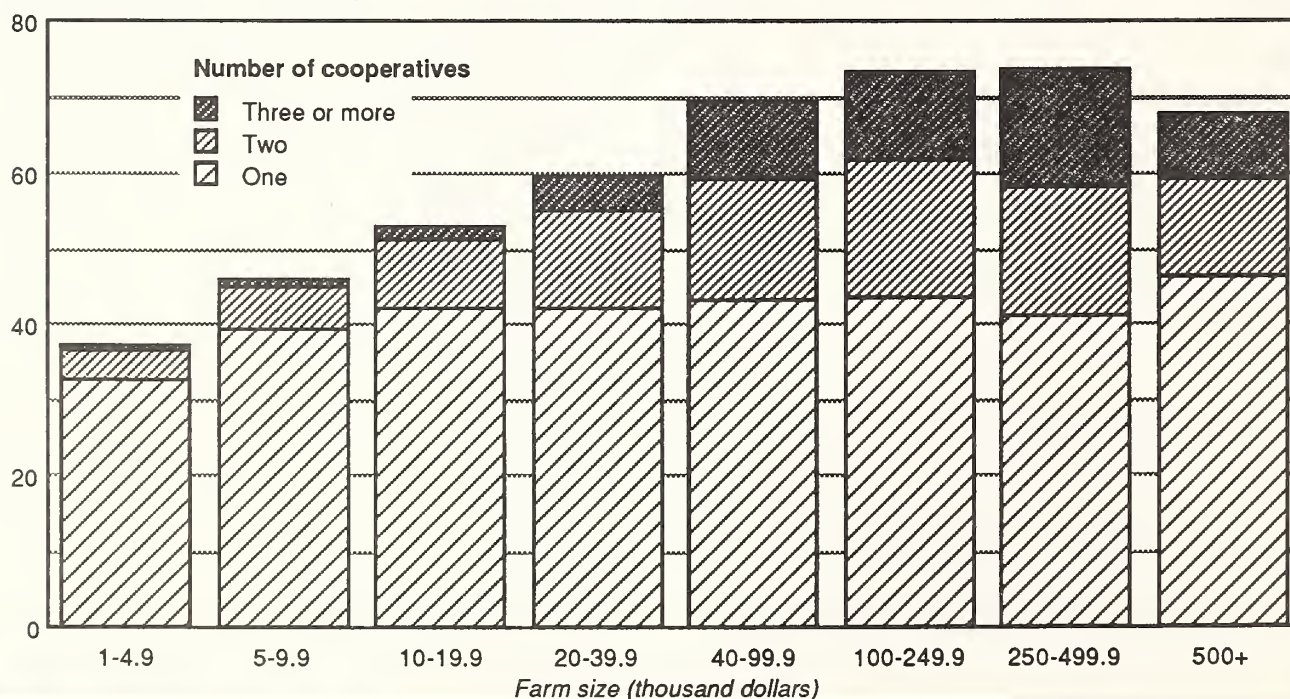
## INACTIVE MEMBERS

Most farmers who held cooperative memberships used their organizations. Crop failure, change in type of farming, and better deals elsewhere may be reasons some members did not. Nearly 42,000 or 1.9 percent of all farmers held memberships but conducted no business with their cooperatives—down from more than 121,000 or 5 percent in 1980. This included members who used other cooperatives as nonmember patrons.

Inactive members ranged from 1.2 percent of farmers in the South Central and Pacific regions to 3 percent in the Corn Belt. The highest percent was among cash grain farmers and those with sales of \$40,000 to \$99,999 (table 18). Dairy farmers and those with sales of \$500,000 or more were more likely to use their memberships.

**Figure 5--Percentage of Farmers Who Used One or More Co-ops to Purchase Farm Supplies, by Size, 1986**

*Percent of farmers in each category*





**Table 18—Percentage of farmers who were inactive members, 1980 and 1986**

Category	Inactive members	
	1980	1986
<i>Percent of farmers in each category</i>		
Region:		
Northeast	5	2
Southeast	4	2
Lake States	8	1
Corn Belt	6	3
Northern Plains	10	2
South Central	2	1
Mountain	3	2
Pacific	3	1
Farm type:		
Cash grain	8	3
Dairy	6	1
Livestock	4	1
Other	4	2
Farm size:		
\$ 1,000 - \$ 4,999	3	2
\$ 5,000 - \$ 9,999	4	2
\$ 10,000 - \$ 19,999	6	2
\$ 20,000 - \$ 39,999	6	2
\$ 40,000 - \$ 99,999	8	3
\$100,000 - \$249,999	8	2
\$250,000 - \$499,999	11	1
\$500,000 or more	8	2
Operator's age:		
Less than 36	—	2
36 to 54	—	2
55 or more	—	2
All farms	5	2

— = Data were not collected for 1980.

The percent of farmers who were inactive members was down in all regions; farm types; and size categories. Number of inactive members dropped the most among farmers in the Lake States and Corn Belt regions; cash grain and livestock producers; and those with annual sales of \$40,000 to \$99,999.

It is not known why a lower percent of farmers were inactive members in 1986 compared to 1980. Possible explanations were that (1) many of the inactive members left farming, (2) more inactive members used cooperatives because of the increased economic stress in agriculture, (3) farmers may have responded differently to the survey question in 1986 than in 1980, and (4) cooperatives made an increased effort to do business with their inactive members.

### NONMEMBER PATRONS

Farmers patronizing cooperatives in which they held no membership can be placed in two broad groups: (1) nonmember patrons of one cooperative holding membership in another; and (2) nonmember patrons holding no membership anywhere.

Information on the first group provides additional insight into the characteristics of farmer members. Information on the second group provides additional information on farmers who have no ties with cooperatives but patronize them as nonmembers.

When farmers in the second group are added to those holding cooperative membership, a more accurate picture is presented of the percent of farmers involved with cooperatives (56 percent or 1.23 million farmers in 1986, compared with 56 percent or 1.36 million farmers in 1980).

### Held Membership In Another Cooperative

More than 131,000, or 6 percent, of all farmers held membership in at least 1 cooperative and patronized another cooperative as a nonmember—down from 165,000 or 7 percent in 1980. Members who used other cooperatives for both marketing and purchasing, marketing, and purchasing as nonmembers included 1, 1, and 4 percent of all farmers, respectively.

The percent of farmers who were members and used other cooperatives as nonmembers was highest among farmers in the Lake States; dairy farmers; and those with annual sales of \$40,000 to \$249,999. The percent of



farmers who held membership and used other cooperatives as nonmembers increased as size of farm increased. The exception was farmers with annual sales above \$250,000. However, the percent of farmers who were members and used other cooperatives as nonmembers decreased slightly as age of operator increased (table 19).

From 1980 to 1986, members who dealt with other cooperatives on a nonmember patron basis decreased nearly 34,000. The biggest change was among members who used other cooperatives as nonmembers for both marketing and purchasing (table 20).

### Held No Cooperative Membership

More than 427,000 (19 percent) of all farmers held no cooperative membership but patronized at least 1 cooperative in 1986, a net increase of nearly 33,000 farmers since 1980. These farmers purchased farm supplies from a cooperative but only 3 percent of all farmers used a cooperative to both market farm products and purchase farm supplies.

In 1986, more nonmembers purchased farm supplies only and fewer used cooperatives both for marketing and purchasing and marketing. From 1980 to 1986, nonmembers who used cooperatives for marketing only decreased in all categories except among dairy farmers and those farmers with sales of \$10,000 to \$19,999. The major change was an increased number of nonmembers who only used cooperatives to purchase farm supplies (table 21).

As would be expected, the greatest decreases in number of nonmember patrons who used cooperatives for both marketing and purchasing were among farmers in the Corn Belt and cash grain farmers.

Fifty-two percent of the nonmember patrons who held no cooperative membership were located in the Southeast and Corn Belt regions. Sixty-five percent had annual gross sales of less than \$10,000. More than half, 53 percent, were livestock producers. Only 15 percent were less than 36 years old. Overall, the percent of farmers who were nonmember patrons decreased as farm size increased.

**Table 19—Percentage of farmers who were members and patronized other cooperatives as nonmembers, 1980 and 1986**

Category	Patronized other co-ops as nonmembers	
	1980	1986
<i>Percent of farmers in each category</i>		
Region:		
Northeast	9	10
Southeast	5	4
Lake States	10	11
Corn Belt	8	6
Northern Plains	11	10
South Central	4	4
Mountain	5	5
Pacific	6	3
Farm type:		
Cash grain	9	8
Dairy	17	16
Livestock	5	4
Other	4	5
Farm size:		
\$ 1,000 - \$ 4,999	2	3
\$ 5,000 - \$ 9,999	6	4
\$ 10,000 - \$ 19,999	8	5
\$ 20,000 - \$ 39,999	9	9
\$ 40,000 - \$ 99,999	12	12
\$100,000 - \$249,999	13	12
\$250,000 - \$499,999	14	9
\$500,000 or more	11	7
Operator's age:		
Less than 36	—	7
36 to 54	—	6
55 or more	—	5
All farms	7	6

— = Data were not collected for 1980.

**Table 20—Change in number of members who patronized other cooperatives as nonmembers, 1980-86**

Category	Marketed only	Purchased only	Market and purchased	Total
<i>Number</i>				
Region:				
Northeast	223	810	(896)	137
Southeast	2,476	(2,834)	(4,773)	(5,131)
Lake States	(477)	(1,782)	(1,294)	(3,553)
Corn Belt	(763)	(2,538)	(12,558)	(15,859)
Northern Plains	189	1,108	(4,277)	(2,980)
South Central	155	1,906	(2,809)	(748)
Mountain	(214)	512	(287)	11
Pacific	(1,204)	(3,557)	(1,078)	(5,839)
Farm type:				
Cash grain	(651)	(5,745)	(14,377)	(20,773)
Dairy	310	(4,670)	(3,002)	(7,362)
Livestock	(1,166)	(70)	(9,035)	(10,271)
Other	1,892	4,110	(1,558)	4,444
Farm size:				
\$ 1,000 - \$ 4,999	1,271	1,751	(2,584)	438
\$ 5,000 - \$ 9,999	(98)	(2,515)	(3,686)	(6,299)
\$ 10,000 - \$ 19,999	212	(4,441)	(4,959)	(9,188)
\$ 20,000 - \$ 39,999	280	(1,957)	(5,758)	(7,435)
\$ 40,000 - \$ 99,999	(1,434)	(1,901)	(5,503)	(8,838)
\$100,000 - \$249,999	(92)	5,843	(2,385)	3,366
\$250,000 - \$499,999	145	(3,710)	(2,088)	(5,653)
\$500,000 or more	101	555	(1,009)	(353)
All farms	385	(6,375)	(27,972)	(33,962)

**Table 21—Change in number of nonmember patrons who held no cooperative membership, 1980-86**

Category	Marketed only	Purchased only	Market and purchased	Total
<i>Number</i>				
Region:				
Northeast	(896)	(1,365)	(2,803)	(5,064)
Southeast	(1,611)	21,859	(9,900)	10,348
Lake States	(2,475)	586	(4,033)	(5,922)
Corn Belt	(1,500)	25,870	(14,252)	10,118
Northern Plains	(8)	8,055	480	8,527
South Central	(1,821)	20,842	(3,353)	15,668
Mountain	(278)	3,191	(3,547)	(634)
Pacific	(1,255)	2,391	(1,537)	(401)
	(9,844)	81,429	(38,945)	32,640
Farm type:				
Cash grain	(4,613)	8,872	(19,518)	(15,259)
Dairy	782	(5,379)	(2,543)	(7,140)
Livestock	(5,850)	45,226	(9,830)	29,546
Other	(163)	32,710	(7,054)	25,493
Farm size:				
\$ 1,000 - \$ 4,999	(4,458)	41,803	(9,570)	27,775
\$ 5,000 - \$ 9,999	(1,191)	19,804	(1,965)	16,648
\$ 10,000 - \$ 19,999	538	7,409	(7,706)	241
\$ 20,000 - \$ 39,999	(1,702)	2,152	(8,330)	(7,880)
\$ 40,000 - \$ 99,999	(1,600)	2,823	(9,717)	(8,494)
\$100,000 - \$249,999	(749)	5,185	(287)	4,149
\$250,000 - \$499,999	(576)	393	(904)	(1,087)
\$500,000 or more	(106)	1,860	(466)	1,288
All farms	(9,844)	81,429	(38,945)	32,640

## NONMEMBER NONPATRONS

More than 977,000, or 44 percent, of all farmers neither held membership in nor patronized a cooperative—more than 93,000 or an 8.7-percent decrease from the nearly 1.1 million nonmember nonpatrons in 1980. The decline in number of nonmember nonpatrons was primarily related to the drop in number of farmers.

The percent of nonmember nonpatrons ranged from a low of 21 percent in the Northern Plains to a high of 64 percent in the South Central region, 13 percent among dairy farmers, and 52 percent among “other” farmers (table 22). By farm size, the percent of nonmember nonpatrons decreased as farm size increased—from 60 percent of farmers with annual sales of \$1,000 to \$4,999 to 20 percent of farmers with annual sales of \$100,000 to \$499,999. The percent of nonmember nonpatrons among farmers with sales of \$500,000 or more dropped from 35 percent in 1980 to 21 percent in 1986.

The largest number of nonmember nonpatrons was in the Southeast and South Central regions. These two regions accounted for nearly 50 percent of all nonmember nonpatrons. Among the nonmember nonpatrons, more than 520,000 and 286,000 were livestock and “other” farmers, respectively. And more than 70 percent of nonmember nonpatrons had annual gross sales of \$1,000 to \$9,999. Only 6 percent had annual sales of \$100,000 and above.

**Table 22—Percentage of farmers who were nonmember nonpatrons, 1980 and 1986**

Category	Nonmember nonpatrons	
	1980	1986
<i>Percent of farmers in each category</i>		
<b>Region:</b>		
Northeast	35	35
Southeast	48	46
Lake States	34	30
Corn Belt	37	41
Northern Plains	23	21
South Central	66	64
Mountain	46	45
Pacific	54	57
<b>Farm type:</b>		
Cash grain	34	31
Dairy	17	13
Livestock	51	51
Other	54	52
<b>Farm size:</b>		
\$ 1,000 - \$ 4,999	61	60
\$ 5,000 - \$ 9,999	48	50
\$ 10,000 - \$ 19,999	39	41
\$ 20,000 - \$ 39,999	34	34
\$ 40,000 - \$ 99,999	25	24
\$100,000 - \$249,999	20	20
\$250,000 - \$499,999	21	20
\$500,000 or more	35	21
<b>Operator's age:<sup>1</sup></b>		
Less than 36	—	40
36 to 54	—	45
55 or more	—	45
All farms	44	44

— = Data were not collected for 1980.



## FARMERS' USE OF COOPERATIVES FOR PRODUCTS MARKETED

In the 1980 survey of farmers, information was not collected to determine the percentage of business farmers did with cooperatives. Consequently, nothing was reported on how much farmers used cooperatives. Whether they used a cooperative to market a small or large share of total farm output or to purchase little or all of their major farm supplies, however, was not known. To find out what percentage of business farmers did with cooperatives, additional questions were added to the 1986 survey.

More than 444,000, or 20 percent, of all farmers used cooperatives to market part of or all their farm products. This is low in comparison with the number of farmers (23 percent) who reported they used a cooperative to market their farm products. There are two possible explanations. One, farmers may have used the services of a cooperative without marketing any product through it; two, farmers may have reported using a cooperative for marketing but the volume was too low to report a percentage figure.

More than 213,000, or 10 percent, of all farmers reported 81-100 percent of their farm products were marketed

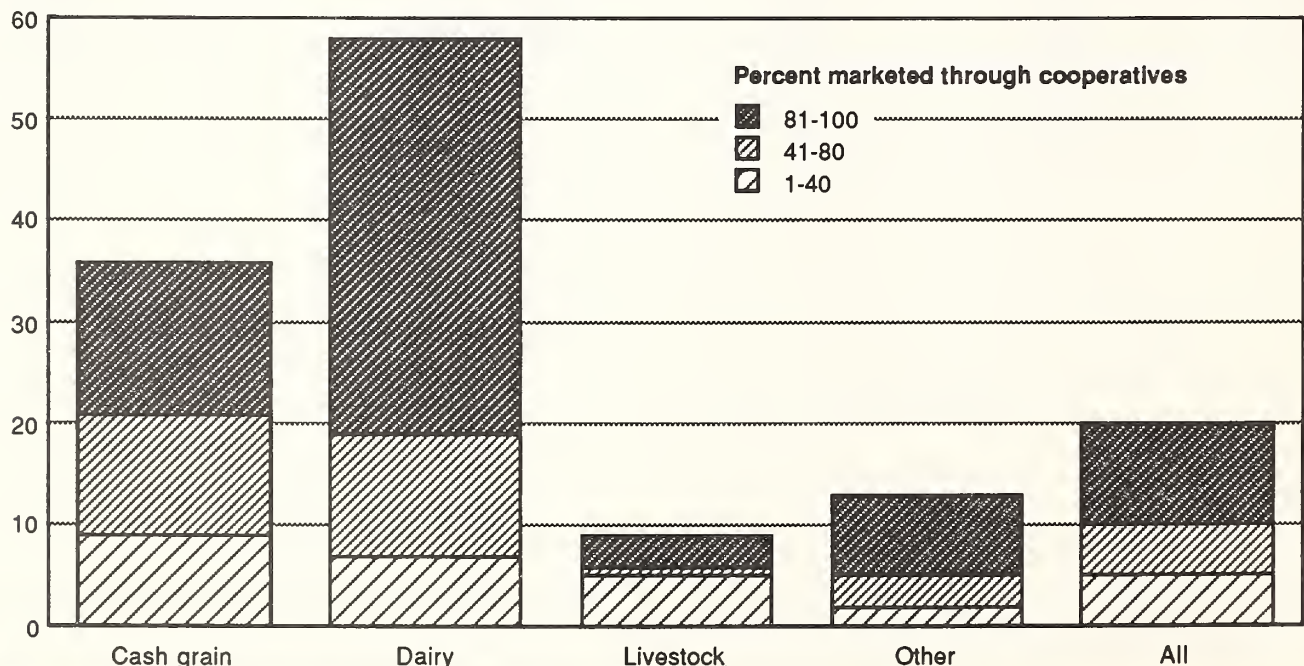
through cooperatives. Nearly 116,000, or 5 percent, marketed 41 to 80 percent and the remaining 115,000 or 5 percent marketed only 1 to 40 percent (table 23 and fig. 6).

The highest percent of farmers who marketed most (81 to 100 percent) of their farm products through cooperatives were in the Lake States, Pacific, Northern Plains, and Northeast regions; among dairy and cash grain farmers; larger farm operators (fig. 7); and operators less than 36 years old. There appeared to be much greater variation in the percentage of farm products marketed through cooperatives by region and farm type than by farm type or operator's age.

Nearly 377,000 or 16 percent of farmers marketed some or all of their principal product through cooperatives. More than 294,000, or 13 percent, marketed 61 to 100 percent of their principal product through cooperatives. A total of 83,000 farmers, or nearly 4 percent, marketed less than 61 percent. Farmers were more likely to market most of their principal product through a cooperative than all products in general. There was greater variation, however, among farmers in the Northern Plains; cash grain farmers; and the large farm operators (table 24).

**Figure 6 - Farmers' Use of Cooperatives for Marketing, by Farm Type and All Farmers, 1986**

*Percent of farmers in each category*



**Table 23—Farmers' use of cooperatives for products marketed, 1986**

Category	Percent of total gross sales					All farmers¹
	1-20	21-40	41-60	61-80	81-100	
Percent of farmers in each category						
Region:						
Northeast	3	1	1	2	11	18
Southeast	1	1	1	2	6	11
Lake States	5	2	5	4	21	37
Corn Belt	4	3	4	3	9	23
Northern Plains	10	8	8	5	14	45
South Central	1	1	1	1	5	9
Mountain	3	2	1	2	5	13
Pacific	2	1	1	2	15	21
Farm type:						
Cash grain	5	4	7	5	15	36
Dairy	6	1	4	8	39	58
Livestock	3	2	1	(²)	3	9
Other	1	1	1	2	8	13
Farm size:						
\$ 1,000 - \$ 4,999	(²)	(²)	1	(²)	3	4
\$ 5,000 - \$ 9,999	(²)	1	1	1	6	9
\$ 10,000 - \$ 19,999	3	3	3	2	9	20
\$ 20,000 - \$ 39,999	4	4	4	3	15	30
\$ 40,000 - \$ 99,999	6	5	6	7	18	42
\$100,000 - \$249,999	8	5	9	5	22	49
\$250,000 - \$499,999	9	10	8	5	15	46
\$500,000 or more	10	5	4	2	21	41
Operator's age:						
Less than 36	4	2	4	3	13	26
36 to 54	3	3	3	3	9	21
55 or more	2	2	2	2	9	17
All farms	3	2	3	2	10	20

<sup>1</sup>Totals may not add due to rounding.

<sup>2</sup>Less than 0.5 percent.

**Table 24—Farmers' use of cooperatives for principal product marketed, 1986**

Category	Percent of principal product sales					All farmers <sup>1</sup>
	1-20	21-40	41-60	61-80	81-100	
Percent of farmers in each category						
Region:						
Northeast	1	1	1	1	12	16
Southeast	(2)	(2)	(2)	(2)	8	8
Lake States	1	1	2	2	26	32
Corn Belt	2	1	3	1	13	20
Northern Plains	4	3	4	3	21	35
South Central	(2)	(2)	1	1	5	7
Mountain	2	1	1	1	6	11
Pacific	1	(2)	(2)	1	16	18
Farm type:						
Cash grain	3	3	5	3	20	34
Dairy	1	1	1	3	46	52
Livestock	1	(2)	1	(2)	3	5
Other	1	(2)	(2)	1	11	13
Farm size:						
\$ 1,000 - \$ 4,999	(2)	(2)	(2)	(2)	4	4
\$ 5,000 - \$ 9,999	(2)	1	1	(2)	7	9
\$ 10,000 - \$ 19,999	1	1	1	1	11	15
\$ 20,000 - \$ 39,999	2	1	2	2	18	25
\$ 40,000 - \$ 99,999	3	2	3	3	24	35
\$100,000 - \$249,999	3	2	4	3	30	42
\$250,000 - \$499,999	4	4	5	2	22	37
\$500,000 or more	5	2	3	1	23	34
Operator's age:						
Less than 36	2	1	2	1	17	23
36 to 54	1	1	1	1	12	16
55 or more	1	1	1	1	11	15
All farms	1	1	1	1	12	16

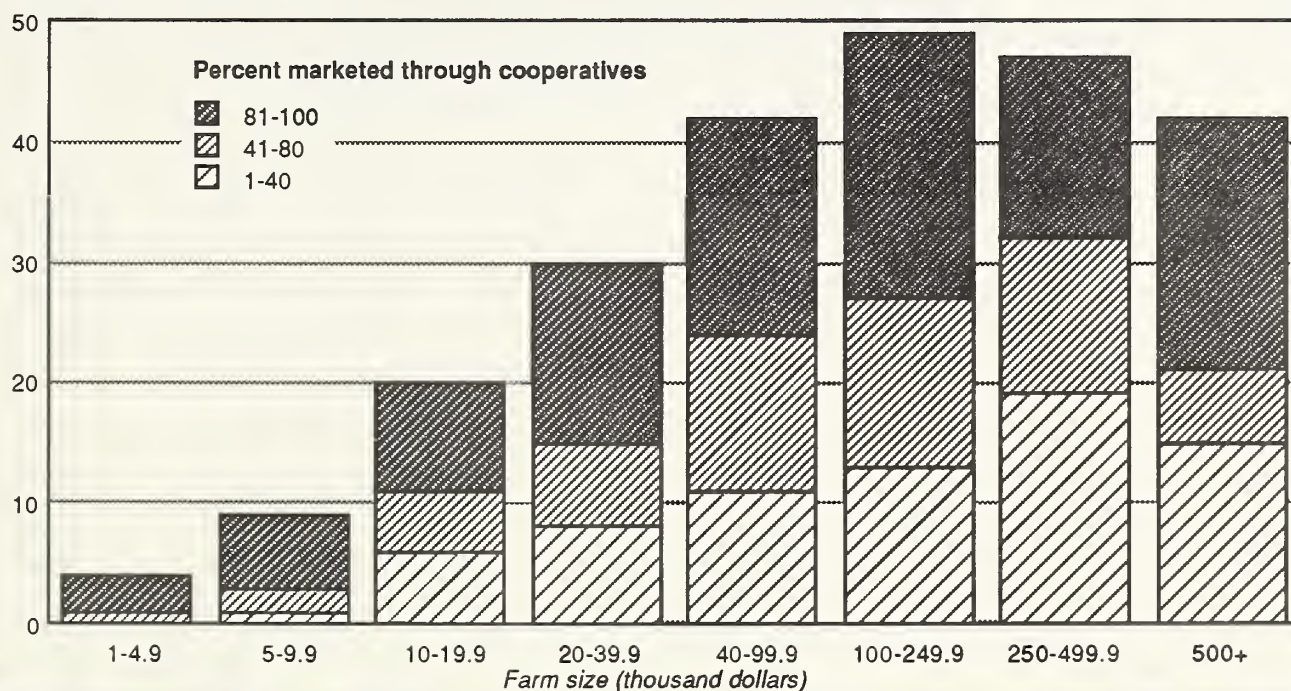
<sup>1</sup>Totals may not add due to rounding.

<sup>2</sup>Less than 0.5 percent.



**Figure 7 - Farmers' Use of Cooperatives for Marketing, by Farm Size, 1986**

*Percent of farmers in each category*



## FARMERS' USE OF COOPERATIVES FOR FARM SUPPLIES PURCHASED

Farmers were asked the percent of farm supplies—feed, fertilizer, farm chemicals, petroleum, and seed—purchased from a cooperative.

### Feed

Nearly 608,000, or nearly 28 percent, of farmers used cooperatives to purchase feed. Sixteen percent purchased 81 to 100 percent of their feed through a cooperative, 6 percent purchased 41 to 80 percent, and the remaining 6 percent purchased 40 percent or less (table 25).

The percent of farmers who purchased 81 to 100 percent of their feed from a cooperative increased slightly as farm size increased—from 15 to 19 percent—except for the largest farm operators. Only 11 percent of farm operators with sales of \$500,000 or more purchased 81 to 100 percent of their feed from cooperatives.

### Fertilizer

More than 661,000, or 30 percent, of farmers purchased fertilizer from cooperatives. Twenty-three percent of the farmers purchased 81 to 100 percent of their fertilizer from cooperatives. Four percent purchased 41 to 80 percent and 3 percent purchased less than 41 percent.

The percent of farmers purchasing 81 to 100 percent of their fertilizer from cooperatives ranged from 10 percent in the Pacific region to 41 percent in the Northern Plains. Among dairy and cash grain farmers, it was 38 and 32 percent, respectively. Overall, the percent of farmers who purchased fertilizer increased as farm size increased except for the very large farm operators (table 26). Younger farmers, less than 36 years old, had a higher percent of farmers who purchased fertilizer than did farmers in the older age groups.

Of farmers who purchased fertilizer from cooperatives, more than 75 percent purchased almost all their fertilizer needs. In comparison with purchases of other major farm supplies, farmers in general purchased a higher percent of fertilizer through cooperatives.

**Table 25—Farmers' use of cooperatives for feed purchased, 1986**

Category	Percent of total feed purchased					All farmers <sup>1</sup>
	1-20	21-40	41-60	61-80	81-100	
Percent of farmers in each category						
Region:						
Northeast	5	2	4	1	22	34
Southeast	4	2	5	2	16	29
Lake States	5	2	3	2	24	36
Corn Belt	5	2	3	2	16	28
Northern Plains	5	2	6	3	20	36
South Central	3	1	4	1	12	21
Mountain	6	1	2	1	10	20
Pacific	3	1	2	( <sup>2</sup> )	7	13
Farm type:						
Cash grain	3	2	3	1	48	57
Dairy	8	4	6	3	28	49
Livestock	5	2	5	2	18	32
Other	2	1	3	1	10	17
Farm size:						
\$ 1,000 - \$ 4,999	3	1	3	1	15	23
\$ 5,000 - \$ 9,999	4	1	4	1	15	25
\$ 10,000 - \$ 19,999	4	2	4	2	16	28
\$ 20,000 - \$ 39,999	5	2	3	3	17	30
\$ 40,000 - \$ 99,999	5	2	4	3	18	33
\$100,000 - \$249,999	7	3	5	2	19	37
\$250,000 - \$499,999	9	3	6	2	19	39
\$500,000 or more	8	1	5	2	11	27
Operator's age:						
Less than 36	4	2	5	2	16	29
36 to 54	5	2	4	2	16	29
55 or more	4	1	4	1	16	26
All farms	4	2	4	2	16	28

<sup>1</sup>Totals may not add due to rounding.

<sup>2</sup>Less than 0.5 percent.

**Table 26—Farmers' use of cooperatives for fertilizer purchased, 1986**

Category	Percent of total fertilizer purchased					All farmers <sup>1</sup>
	1-20	21-40	41-60	61-80	81-100	
Percent of farmers in each category						
Region:						
Northeast	2	1	3	2	21	29
Southeast	1	1	4	1	23	30
Lake States	2	1	4	1	36	44
Corn Belt	2	1	3	1	23	30
Northern Plains	2	2	4	2	41	51
South Central	1	1	1	1	15	19
Mountain	1	( <sup>2</sup> )	1	( <sup>2</sup> )	15	17
Pacific	1	( <sup>2</sup> )	1	1	10	13
Farm type:						
Cash grain	2	2	4	2	32	42
Dairy	2	1	5	2	38	48
Livestock	1	1	2	1	20	25
Other	1	1	3	1	16	22
Farm size:						
\$ 1,000 - \$ 4,999	1	( <sup>2</sup> )	2	( <sup>2</sup> )	15	18
\$ 5,000 - \$ 9,999	1	1	3	1	21	27
\$ 10,000 - \$ 19,999	1	1	2	1	25	30
\$ 20,000 - \$ 39,999	1	2	4	2	29	38
\$ 40,000 - \$ 99,999	2	2	5	2	34	45
\$100,000 - \$249,999	4	2	6	2	35	49
\$250,000 - \$499,999	5	2	5	3	37	52
\$500,000 or more	6	6	5	2	21	40
Operator's age:						
Less than 36	2	1	4	1	26	34
36 to 54	2	1	3	1	22	29
55 or more	1	1	3	1	23	29
All farms	2	1	3	1	23	30

<sup>1</sup>Totals may not add due to rounding.

<sup>2</sup>Less than 0.5 percent.

## Farm Chemicals

Nearly 545,000, or 24 percent, of farmers purchased farm chemicals from cooperatives. Eighteen percent purchased almost all their farm chemical needs from cooperatives, 3 percent purchased 41 to 80 percent, and 3 percent purchased less than 41 percent.

The pattern of purchases by farmers was similar to the patterns shown of other farm supplies. Of those who

purchased from a cooperative, 75 percent purchased almost all their farm chemical needs.

Forty-four and 38 percent of farmers in the Northern Plains and Lake States, respectively, purchased farm chemicals from cooperatives. However, a higher percent of farmers in the Lake States purchased 81 to 100 percent of their farm chemicals than did farmers in the Northern Plains. The lowest percent of farmers who purchased 81 to 100 percent of their farm chemical needs from

**Table 27—Farmers' use of cooperatives for chemicals purchased, 1986**

Category	Percent of total farm chemicals purchased					All farmers <sup>1</sup>
	1-20	21-40	41-60	61-80	81-100	
Percent of farmers in each category						
Region:						
Northeast	3	1	2	1	18	25
Southeast	1	1	3	1	16	22
Lake States	2	( <sup>2</sup> )	2	1	33	38
Corn Belt	3	1	2	1	20	27
Northern Plains	4	2	5	2	31	44
South Central	1	( <sup>2</sup> )	2	1	10	14
Mountain	2	1	2	1	14	20
Pacific	1	1	1	1	9	13
Farm type:						
Cash grain	4	2	4	2	29	41
Dairy	2	1	4	2	36	45
Livestock	1	1	2	1	13	18
Other	2	1	3	1	13	20
Farm size:						
\$ 1,000 - \$ 4,999	1	( <sup>2</sup> )	1	( <sup>2</sup> )	9	11
\$ 5,000 - \$ 9,999	1	1	2	( <sup>2</sup> )	15	19
\$ 10,000 - \$ 19,999	2	1	2	1	20	26
\$ 20,000 - \$ 39,999	2	1	4	1	25	33
\$ 40,000 - \$ 99,999	3	1	5	2	31	42
\$100,000 - \$249,999	5	2	4	2	33	46
\$250,000 - \$499,999	7	3	4	4	32	49
\$500,000 or more	7	2	4	2	23	38
Operator's age:						
Less than 36	2	1	3	1	22	29
36 to 54	2	1	2	1	18	24
55 or more	2	1	3	1	17	24
All farms	2	1	2	1	18	24

<sup>1</sup>Totals may not add due to rounding.

<sup>2</sup>Less than 0.5 percent.



cooperatives was in the Pacific region (table 27).

The percent of farmers who purchased farm chemicals from cooperatives increased as farm size increased except for farmers with annual sales of \$500,000 or more. Also, larger operators purchased more of their total chemical needs from cooperatives than did smaller farmers.

The percent of farmers who purchased farm chemicals was highest among farmers less than 36 years old and declined slightly as age of operator increased.

## Seed

More than 424,000, or 19 percent, of all farmers purchased seed from a cooperative. Eleven percent purchased 81 to 100 percent; 4 percent purchased 41 to 80 percent; and 4 percent purchased less than 41 percent from cooperatives. In general, a higher percent of farmers purchased less seed through cooperatives than they did other farm supplies.

**Table 28—Farmers' use of cooperatives for seed purchased, 1986**

Category	Percent of total seed purchased					All farmers <sup>1</sup>
	1-20	21-40	41-60	61-80	81-100	
<i>Percent of farmers in each category</i>						
Region:						
Northeast	3	2	4	1	12	22
Southeast	2	1	4	1	18	26
Lake States	4	2	3	1	13	23
Corn Belt	5	1	3	( <sup>2</sup> )	8	17
Northern Plains	5	2	3	1	10	21
South Central	1	( <sup>2</sup> )	1	1	10	13
Mountain	2	1	1	( <sup>2</sup> )	8	12
Pacific	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	( <sup>2</sup> )	6	6
Farm type:						
Cash grain	5	2	4	1	11	23
Dairy	5	4	6	1	14	30
Livestock	2	1	2	( <sup>2</sup> )	11	16
Other	2	1	2	1	11	17
Farm size:						
\$ 1,000 - \$ 4,999	1	( <sup>2</sup> )	1	( <sup>2</sup> )	10	12
\$ 5,000 - \$ 9,999	1	1	3	( <sup>2</sup> )	14	19
\$ 10,000 - \$ 19,999	2	1	3	1	13	20
\$ 20,000 - \$ 39,999	4	1	4	1	12	22
\$ 40,000 - \$ 99,999	6	3	5	1	11	26
\$100,000 - \$249,999	7	3	5	1	12	28
\$250,000 - \$499,999	13	4	4	3	10	34
\$500,000 or more	7	2	3	1	11	23
Operator's age:						
Less than 36	4	2	2	1	10	19
36 to 54	3	2	2	1	11	19
55 or more	2	1	4	1	12	20
All farms	3	1	3	1	11	19

<sup>1</sup>Totals may not add due to rounding.

<sup>2</sup>Less than 0.5 percent.

Regionally, the Southeast had the most farmers who purchased seed from cooperatives. The number of farmers in other regions who purchased seed ranged from 23 percent in the Lake States to 6 percent in the Pacific region (table 28).

The percent of farmers who purchased seed from cooperatives was highest among dairy and cash grain farmers. However, more than half (52 to 53 percent) of

these farmers purchased less than 81 percent of their total seed from cooperatives.

The percent of farmers who purchased seed increased as farm size increased except for the largest farm operators. However, as size of farm increased, a lower percentage of total seed was purchased from cooperatives. Seventeen percent of farmers with annual sales of \$250,000 to \$499,999 purchased less than 41 percent of their seed from cooperatives.

**Table 29—Farmers' use of cooperatives for petroleum purchased, 1986**

Category	Percent of total petroleum purchased					All farmers <sup>1</sup>
	1-20	21-40	41-60	61-80	81-100	
<i>Percent of farmers in each category</i>						
Region:						
Northeast	2	1	2	( <sup>2</sup> )	12	17
Southeast	1	( <sup>2</sup> )	2	( <sup>2</sup> )	6	9
Lake States	3	1	2	1	27	34
Corn Belt	1	1	2	1	21	26
Northern Plains	5	2	8	3	35	53
South Central	1	1	2	2	6	12
Mountain	5	1	2	2	18	28
Pacific	( <sup>2</sup> )	1	1	1	7	10
Farm type:						
Cash grain	3	1	4	2	28	38
Dairy	3	1	4	2	26	36
Livestock	1	1	2	1	11	16
Other	1	1	1	1	8	12
Farm size:						
\$ 1,000 - \$ 4,999	1	( <sup>2</sup> )	1	( <sup>2</sup> )	6	8
\$ 5,000 - \$ 9,999	1	1	2	1	13	18
\$ 10,000 - \$ 19,999	2	1	4	1	16	24
\$ 20,000 - \$ 39,999	2	1	4	2	19	28
\$ 40,000 - \$ 99,999	3	1	4	2	29	39
\$100,000 - \$249,999	3	2	4	2	30	41
\$250,000 - \$499,999	5	3	6	1	33	48
\$500,000 or more	5	( <sup>2</sup> )	2	2	24	33
Operator's age:						
Less than 36	2	1	2	1	19	25
36 to 54	2	1	3	1	14	21
55 or more	2	1	2	1	15	21
All farms	2	1	2	1	15	21

<sup>1</sup>Totals may not add due to rounding.

<sup>2</sup>Less than 0.5 percent.

## Petroleum

More than 472,000, or 21 percent, of farmers purchased petroleum (gas, oil, and other lubricants) from cooperatives. Fifteen percent purchased more than 80 percent of all their petroleum needs through cooperatives. Three percent purchased 41 to 80 percent and 3 percent purchased less than 41 percent (table 29).

The highest percent of farmers who purchased petroleum from cooperatives was among those in the Northern Plains; cash grain farmers; farmers with annual sales of \$250,000 to \$499,999; and farmers less than 36 years old.

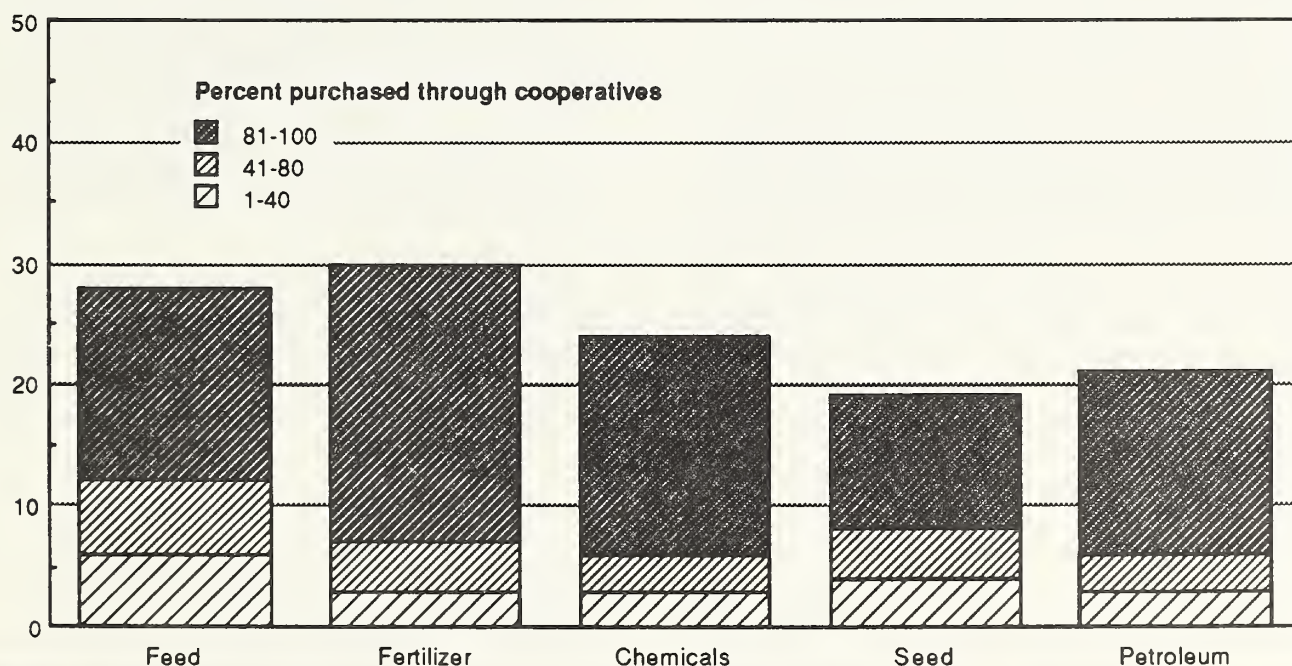
Six percent of farms in the Southeast and South Central regions, and 35 percent in the Northern Plains purchased almost all their petroleum from cooperatives.

The percent of farmers who purchased petroleum from cooperatives increased as size of farm increased except for the largest farm operators. Forty-eight percent of farmers with annual sales of \$250,000 to \$499,999 purchased petroleum from cooperatives. This dropped to 33 percent for farmers with sales of \$500,000 or more.

Overall, farmers showed some commitment to cooperatives as shown by the large percent of farmers who purchased 81 to 100 percent of the major farm supplies from cooperatives (fig. 8).

**Figure 8--Farmers' Use of Cooperatives to Purchase Major Farm Supplies, 1986**

*Percent of farmers in each category*





## CONCLUSIONS AND IMPLICATIONS

The decline in number of farms from 1980 to 1986 resulted in fewer cash grain farmers and more "other" farmers. This partially contributed to a decrease in number of cooperative members because a much lower percent of "other" farmers held membership than cash grain farmers. However, the increased percent of farmers who used cooperatives to purchase farm supplies from cooperatives as nonmembers and the increased percent of large farm operators who used cooperatives for marketing farm products and purchasing farm supplies indicated the importance of cooperatives to farmers during this time period.

The significant decline in inactive members from 1980 to 1986 also reflected positively on cooperatives. It is not known, however, if the decrease was because farmers left farming or became active members. Historically, farmers are more likely to organize and use cooperatives during difficult economic times.

Changes in the economic and agricultural environment need to be taken into consideration in drawing conclusions regarding changes in number of farms, members, and use of cooperatives. Changes observed from 1980 to 1986 may not be representative of changes to come.

Many farmers were committed to cooperatives in their marketing and purchasing activities. This was shown by the large number of farmers who marketed 81 to 100 percent of their products through cooperatives and/or purchased 81 to 100 percent of their farm supplies from cooperatives. However, a relatively large number of farmers do not use cooperatives for all their marketing and purchasing activities. This may be an area where cooperatives could expand market share.

Even though the percent of farmers who held cooperative memberships declined, the percent of farmers who patronized cooperatives as nonmembers increased, leaving farmer involvement with cooperatives about the same. Fifty-six percent of farmers were either members or nonmember patrons of cooperatives. The decline in the percent of farmers who held memberships, however, does raise some questions. Will this trend continue? Should cooperatives change their membership policies? If memberships in cooperatives decline while nonmember patrons increase, how will this affect member investment, commitment, and control?

In general, the percent of farmers who held cooperative memberships decreased as age of operator increased. If this relationship is significant, cooperatives must find out the reasons why this is happening and what if anything should or could be done about it.

Most of the increase in number of nonmember patrons from 1980 to 1986 was among livestock producers and farmers with annual sales of less than \$10,000. There could be a number of reasons why these farmers were not members such as the small volume of business done with cooperatives, membership policies, no interest by small farm operators, or lack of interest by cooperatives to have them as members.

Farmers' use of multiple cooperatives was greatest in the Lake States, Northern Plains, and Corn Belt. These regions also accounted for the largest number of marketing/farm supply cooperatives. The implications are that many farmers used competing cooperatives. This duplication of resources could be costly. This situation appears to exist for both marketing and purchasing cooperatives because the level of multiple use was about the same. Twenty-five percent of farmers used two or more cooperatives to purchase farm supplies and twenty-six percent of farmers used two or more cooperatives to market farm products.

Commercial farmers with \$40,000 or more in annual gross farm sales made the most use of marketing/farm supply cooperatives. It is well known that these farmers accounted for a large percent of farm purchases and sales. It is important, therefore, that cooperatives evaluate how best to serve these farmers.

An important finding was the increased membership in and use of cooperatives by the largest farm operators, those with \$500,000 or more. However, the percent of business these farmers did with cooperatives in both marketing and purchasing was not quite as high as the percent of business done by farmers in the next lower size grouping. If the group with \$500,000 or more in sales continues to become larger and the percent of business they do with cooperatives declines, this also could have serious implications for some cooperatives. Cooperatives need to know more about these largest farm operators and how they can serve them equitably and efficiently.

Farmers who used cooperatives least were among small livestock and "other" farmers in the South Central, Southeast, and Mountain regions. The demographic, cultural, and economic conditions that might help to



explain why a lower percent of farmers used cooperatives needs to be determined. Farmers in these areas may be able to enhance their income through cooperation.

Whether nonmember nonpatrons can benefit more from the use of cooperatives also needs further study. More than 82 percent of nonmember nonpatrons were livestock and "other" producers. Cooperative activity was lowest among these producers. Seventy percent had annual gross sales of less than \$10,000, and 50 percent were located in the Southeast and South Central regions.

### Survey Description

This report is based on special questions included in the June 1987 Acreage and Livestock Enumerative Survey conducted by the National Agricultural Statistics Service, (NASS), formerly the Statistical Reporting Service, (SRS). The area frame was the basic sample method used to collect the information.

About 17,000 farmers were interviewed personally for the information summarized here. Enumerators were trained before making personal interviews so they could understand better the precise information requested.

The population of farms sampled was about 211,000 under the total population of U.S. farms. However, it was assumed that those farms not in the population surveyed were representative of the farms in the survey. Consequently, data from the survey were expanded to represent the total population.

An earlier study was completed using information gathered from the June 1981 Acreage and Livestock Enumerative Survey. That study, however, did not collect information on level of cooperative usage and operator's age. Three ACS reports covering the information were published in the early 1980's (see Other Publications). However, since this study included more regions and farm size groupings, actual data from this survey were used for making comparisons to data collected for 1986. Consequently, some differences may be found in 1980 data reported here and earlier published figures.

Because not all farmers were interviewed, survey estimates are subject to sampling variability. Coefficients of variation (CV) provide a means of evaluating survey results. If the CV of an item were 5 percent, chances are 67 out of 100 that the population value would be within 5 percent of the survey value and 95 out of 100 would be within 10 percent. Estimated CVs for farmers reporting membership in a cooperative by region, farm type, farm size, and age are shown in appendix table 5.

Sampling variability for some survey items describing smaller segments of the population is somewhat greater.

As in all information collected by interview, nonsampling errors can occur, resulting from omissions, incorrect answers, and other errors in data. These errors cannot be measured directly but are minimized through rigid quality controls in data collection and through consistency checks before summarization.

## Definitions

*Marketing and farm supply cooperatives*-- Farmer cooperatives operating as marketing, farm supply, or both. Bargaining associations are counted as marketing cooperatives. Also included are cooperatives providing services related to marketing or furnishing farm supplies, such as cotton gins, rice dryers, and transportation cooperatives. These cooperatives usually provide for one vote per member, limited return on invested capital, and return of net margins to member patrons or all patrons on a patronage basis. They also obtain more than half their business from members.

Excluded from this study are cooperatives organized by farmers to provide production services, such as farm management, credit, fire insurance, electricity, and irrigation. Also excluded are cooperatives providing personal services and products, such as cooperative hospitals and medical clinics, burial societies, community (cooperative) water systems, and cooperative grocery stores.

*Member patrons*-- Farmers holding membership in and marketing products through or purchasing farm supplies from a marketing and/or farm supply cooperative.

*Nonmember patrons*-- Farmers not holding membership in but marketing products through or purchasing farm supplies from a marketing and/or farm supply cooperative.

*Nonmember nonpatrons*-- Farmers neither holding membership in nor patronizing any marketing and/or farm supply cooperative.

*Farms*-- Places from which \$1,000 or more of agricultural products were sold, or normally would be sold, during the year.

*Farm classification*-- Farms classified by their main source of gross revenue. In this study, they are grouped into four classifications—cash grain, dairy, livestock, and other.

## OTHER PUBLICATIONS

Paul C. Wilkins, *Marketing and Farm Supply Cooperatives: Membership and Use*, 1980, ACS Research Report Number 28, May 1983.

\_\_\_\_\_, *Marketing and Farm Supply Cooperatives: Livestock Producer Membership and Use*, 1980, ACS Research Report Number 33, January 1984.

\_\_\_\_\_, *Marketing and Farm Supply Cooperatives: Commercial Farmer Membership and Use*, 1980, ACS Research Report Number 42, July 1984.

## APPENDIX TABLES

**Appendix table 1—Farms by region and farm type, 1980 and 1986**

Farm type	Region								
	North-east	South-east	Lake States	Corn Belt	Northern Plains	South Central	Mountain	Pacific	United States
Thousands									
1980									
Cash grain	18	85	88	242	105	51	24	18	631
Dairy	51	22	79	30	12	8	5	7	214
Livestock	43	282	72	218	78	276	52	63	1,084
Other	50	201	45	38	9	50	29	81	504
Total	162	590	284	528	204	385	110	169	2,433
1986									
Cash grain	12	44	63	191	95	38	23	7	473
Dairy	36	15	68	32	8	8	4	10	181
Livestock	41	270	50	199	76	262	56	58	1,012
Other	55	199	53	47	16	69	33	75	546
Total	144	528	234	469	195	377	116	150	2,212

Note: Totals may not add due to rounding.

**Appendix table 2—Farms by region and farm size, 1980 and 1986**

Farm size	Region								
	North-east	South-east	Lake States	Corn Belt	Northern Plains	South Central	Mountain	Pacific	United States
<i>Thousands</i>									
<b>1980</b>									
\$ 1,000 - \$ 4,999	69	319	85	154	24	209	34	74	969
\$ 5,000 - \$ 9,999	15	89	33	54	17	47	10	17	282
\$ 10,000 - \$ 19,999	16	65	38	52	31	39	13	14	267
\$ 20,000 - \$ 39,999	15	46	34	73	42	31	15	18	274
\$ 40,000 - \$ 99,999	28	42	57	106	54	31	21	17	355
\$100,000 - \$249,999	13	18	29	55	25	18	10	12	181
\$250,000 - \$499,999	3	7	8	30	8	6	5	13	80
\$500,000 or more	2	3	0	6	3	3	3	4	24
<b>Total</b>	<b>162</b>	<b>590</b>	<b>284</b>	<b>528</b>	<b>204</b>	<b>385</b>	<b>110</b>	<b>169</b>	<b>2,433</b>
<b>1986</b>									
\$ 1,000 - \$ 4,999	65	313	61	136	28	207	39	70	918
\$ 5,000 - \$ 9,999	16	71	30	63	15	52	12	15	274
\$ 10,000 - \$ 19,999	11	45	23	56	26	33	13	15	221
\$ 20,000 - \$ 39,999	10	34	26	54	28	26	16	12	205
\$ 40,000 - \$ 99,999	19	32	46	78	51	32	17	14	289
\$100,000 - \$249,999	17	22	36	60	35	20	13	11	214
\$250,000 - \$499,999	3	7	8	15	9	6	3	6	58
\$500,000 or more	2	3	4	6	4	3	2	8	33
<b>Total</b>	<b>144</b>	<b>528</b>	<b>234</b>	<b>469</b>	<b>195</b>	<b>377</b>	<b>116</b>	<b>150</b>	<b>2,212</b>

Note: Totals may not add due to rounding.



**Appendix table 3—Farms by farm type and size, 1980 and 1986**

Farm size	Farm type				United States
	Cash Grain	Dairy	Livestock	Other	
Thousands					
1980					
\$ 1,000 - \$ 4,999	130	12	603	225	969
\$ 5,000 - \$ 9,999	67	8	142	65	282
\$ 10,000 - \$ 19,999	85	17	104	61	267
\$ 20,000 - \$ 39,999	107	37	79	51	274
\$ 40,000 - \$ 99,999	143	79	87	46	355
\$100,000 - \$249,999	63	44	41	32	181
\$250,000 - \$499,999	31	14	19	17	80
\$500,000 or more	6	3	8	7	24
Total	631	213	1,084	504	2,433
1986					
\$ 1,000 - \$ 4,999	85	6	550	278	918
\$ 5,000 - \$ 9,999	53	4	146	71	274
\$ 10,000 - \$ 19,999	63	8	99	51	221
\$ 20,000 - \$ 39,999	66	26	69	44	205
\$ 40,000 - \$ 99,999	97	63	79	50	289
\$100,000 - \$249,999	82	55	47	31	214
\$250,000 - \$499,999	20	12	15	11	58
\$500,000 or more	7	8	8	10	33
Total	473	181	1,012	546	2,212

Note: Totals may not add due to rounding.

**Appendix table 4—Farms by operator's age and farm size and operator's age and farm type, 1986**

Category	Operator's age			All farms <sup>1</sup>
	Less than 36	36 to 54	55 or more	
<i>Thousand</i>				
Farm size:				
\$ 1,000 - \$ 4,999	108	378	432	918
\$ 5,000 - \$ 9,999	30	111	133	274
\$ 10,000 - \$ 19,999	30	89	102	221
\$ 20,000 - \$ 39,999	31	84	90	205
\$ 40,000 - \$ 99,999	57	126	105	289
\$100,000 - \$249,999	48	107	59	214
\$250,000 - \$499,999	11	30	17	58
\$500,000 or more	6	18	10	33
Farm type:				
Cash grain	86	191	196	473
Dairy	48	83	51	181
Livestock	110	421	481	1,012
Other	77	249	220	546
All farms <sup>1</sup>	321	943	948	2,212

<sup>1</sup>Totals may not add due to rounding.

**Appendix table 5—Farm operators reporting membership in marketing/farm supply cooperatives by region, farm type, farm size, and operator's age and related coefficients of variation**

Category	Farmers reporting memberships <sup>1</sup>	Coefficients of variation
	<i>Thousands</i>	<i>Percent</i>
Region:		
Northeast	56	5.9
Southeast	157	4.6
Lake States	131	5.1
Corn Belt	179	4.6
Northern Plains	125	6.2
South Central	71	6.6
Mountain	43	9.6
Pacific	46	9.0
Farm type:		
Cash grain	244	3.9
Dairy	138	4.5
Livestock	266	3.2
Other	159	4.4
Farm size:		
\$ 1,000 - \$ 2,499	87	5.9
\$ 2,500 - \$ 4,999	74	5.6
\$ 5,000 - \$ 9,999	70	6.0
\$ 10,000 - \$ 19,999	84	5.3
\$ 20,000 - \$ 39,999	102	4.9
\$ 40,000 - \$ 99,999	181	3.8
\$100,000 - \$249,999	147	4.0
\$250,000 - \$499,999	40	7.3
\$500,000 or more	23	11.5
Operator's age:		
Less than 36	129	4.3
36 to 54	343	2.8
55 or more	335	3.0
United States	807	2.1

<sup>1</sup>Totals may not add due to rounding.

☆ U.S.G.P.O.: 1989- 621-778/01090







NATIONAL AGRICULTURAL LIBRARY



1022269067

*Handwritten mark*



---

## U.S. Department of Agriculture Agricultural Cooperative Service

P.O. Box 96576

Washington, D.C. 20090-6576

**A**gricultural Cooperative Service (ACS) provides research, management, and educational assistance to cooperatives to strengthen the economic position of farmers and other rural residents. It works directly with cooperative leaders and Federal and State agencies to improve organization, leadership, and operation of cooperatives and to give guidance to further development.

The agency (1 ) helps farmers and other rural residents develop cooperatives to obtain supplies and services at lower cost and to get better prices for products they sell; (2) advises rural residents on developing existing resources through cooperative action to enhance rural living; (3) helps cooperatives improve services and operating efficiency; (4) informs members, directors, employees, and the public on how cooperatives work and benefit their members and their communities; and (5) encourages international cooperative programs.

ACS publishes research and educational materials and issues *Farmer Cooperatives* magazine. All programs and activities are conducted on a nondiscriminatory basis, without regard to race, creed, color, sex, age, marital status, handicap, or national origin.